Mining and Automotive Skills Alliance

Workforce Insights Report 2026

Workforces in Transition

Acknowledgement of Country

We acknowledge the Traditional Custodians of the lands on which we live and work. We acknowledge Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We honour and respect their Elders, past and present, and extend that respect to all First Nations people.

Contents

CEO foreword

I am proud to present Mining and Automotive Skills Alliance's (AUSMASA's) *2026 Workforce Insights Report – Workforces in Transition*.

Building on our previous work, our 2026 report draws on extensive consultations, qualitative, and quantitative research to inform our work and research priorities. It delves into key trends driving the ebbs and flows within the Automotive and Mining workforces, electrification, licensing (including the need for national harmonisation), digitalisation, and the need for flexibility across skills, pathways, and career lifecycles.

Both industries are entering a period of profound transformation. The transition toward Net Zero emissions, rapid technological advancement, and evolving community and workforce expectations are fundamentally changing how work is performed, where it occurs, and the capabilities required to succeed. These changes present a significant opportunity, but also a risk if workforce systems, training arrangements, and policy settings do not evolve at the same pace as industry needs.

This year, AUSMASA has adopted a digital-first delivery model through the Research Hub on our website. This modular approach allows research findings to be released progressively, enabling ongoing engagement with stakeholders and ensuring insights remain timely, accessible, and actionable throughout the year rather than confined to a single publication cycle.

At its core, workforce planning is about partnership. The insights captured in this report reflect contributions from industry leaders, workers, unions, training providers, governments, and community representatives across Australia. Their perspectives ensure that this plan is grounded not only in data but in lived industry experience.

Our work is informed by the National Skills Agreement and aligns with various federal and state priorities and initiatives, including Closing the Gap, improving gender equity outcomes, the Critical Minerals Strategy, and the National Electric Vehicle Strategy. We also actively contribute to various policy conversations, providing direct input to work on the Migration Occupation Lists, Apprenticeship Priority Lists, and other reviews conducted by the Productivity Commission and the Australian Bureau of Statistics.

As the Jobs and Skills Council (JSC) for Mining and Automotive, AUSMASA's role is to act as a trusted steward, connecting industry voice with intelligence to enable evidence-based decision-making and policymaking. The opportunities outlined in this report are not owned by any single organisation; they require coordinated action across industry, education, and government. We welcome opportunities to collaborate and coordinate.

The transition underway is significant, but so too is Australia's capability to navigate it successfully. With collaboration, innovation, and a shared commitment to building skills, we can ensure that both industries continue to provide high-quality jobs, strong regional economies, and sustainable, inclusive growth for decades to come.

I extend my gratitude to our union, industry, government, and education partners. Your contributions are vital to our shared success. Our workforce planning outputs will serve as a valuable resource in our collective efforts to strengthen Australia's Mining and Automotive workforces for a sustainable, inclusive, and innovative future, as the industries transition into the industries of the future.

Dr. Gavin Lind,
Chief Executive Officer

Learn more about AUSMASA:

Executive summary

Automotive

The Automotive industry is an important employer in the economy with a workforce over 320,000. **Gender** representation has improved, with the female workforce now comprising 18.1% of the total workforce. The industry has an average worker aged 40, and less than 15% of the workforce is below the age of 24; the workforce is on the brink of ageing.[1]

Net Zero goals and **technological advancement** are driving the adoption of **electrification** and the development of electric **skills**. As electrification becomes increasingly commonplace, **licensing** is becoming an increasingly important part of the conversation. A conversation complicated by the numerous intersecting state and federal licenses, regulations, and standards. This means licensing can either become a **productivity** enabler or a **skills bottleneck**. AUSMASA has considered risk-based licensing design principles, which can mitigate some of these concerns.

Technological advancement has also driven increased demand for **diagnostic** and **digital skills**; however, the industry faces **acute skills shortages** and bottlenecks in the **apprenticeship** pipeline, compounded by challenges in **retention**, **attraction**, and **recruitment**. Challenges also impact the Training and Assessment (**TAE**) workforce, which has adversely affected the skills pipeline. The apprenticeship pipeline is also constrained by the **inaccessibility** of 'Original Equipment Manufacturer' (OEM) proprietary or specific information, particularly for Registered Training Organisations (RTOs). There is a need to have clearer entry routes and better retention to widen the talent pool.

Apprenticeship completion rates have improved in some key trades since 2017, like Automotive Electricians – but overall, those across Automotive Retail, Service, and Repair (AUR) apprenticeships still sit below the 2012 highs.[2] The apprenticeship ecosystem also faces **demographic**, **cultural**, and **financial** challenges. Several vocational courses are being updated for Electric Vehicles (EVs), Advanced Driver Assistance Systems (**ADAS**), and hydrogen fuel-cell vehicles. The strong growth in the sale of electric vehicles, both hybrid EVs and Battery Electric Vehicles (BEVs), means that the automotive workforce of the future will need more EV Technicians (or technicians with EV-relevant skills) and **workshops** capable of managing **end-of-life** for electric vehicle batteries. The automotive sector will play a critical role in the **circular economy**.

[1] AUSMASA, "Workforce Data Dashboard", 2025.
[2] NCVER, "Apprentice & trainee 4-year completion rates in AUR – DataBuilder", 2026.

Mining

The Mining industry is an important employer in the economy, with a workforce well over 300,000 and one-fifth of that workforce is female. The industry has an **ageing** workforce, with the average worker aged 41, and fewer than 6% aged 24 or younger.[3]

Given the growing demand and importance of **critical minerals**, the industry is set to experience increased workforce demand and greater electrification (towards **Net Zero**). However, critical minerals and, by extension, their industry are harder to identify and track due to challenges with the Australian and New Zealand Standard Industrial Classification (ANZSIC) classification system. Growing electrification has also increased pressure from technological advancement, meaning there is a greater need for industry to source **higher-education**-aligned skills and fill increasingly **AI-augmented roles**, made even more challenging by **OEM-specific technology variations** and the increasing demand for digital and **diagnostic skills**. As electrification heads towards ubiquity, licensing and the need for national consistency will become an important conversation. The licensing landscape is complex, with overlapping federal and state regulations, standards, and licenses.

An increasing number of mines are approaching **closure, making rehabilitation** and **post-mining use** important aspects of **mine planning**. By extension, this also means more planning is needed throughout the skills lifecycle to ensure existing workers are appropriately transitioned, a task made challenging by the regional nature of mining activity.

The Mining industry is concentrated in the regions and, as such, faces **acute skills shortages** that are significantly greater than those in most industries. The **regional** nature of the industry also means that **workforce transitions** (from commodity to commodity or site to site) are not as straightforward as they would be elsewhere, often exacerbated by the higher incidence of **mental health** challenges. This places unique consideration on retention, attraction, and recruitment.

In the Vocational Education and Training (VET) ecosystem, the Resources and Infrastructure Industry (RII) training package sees lower enrolments often due to a misalignment between industry expectations and what the **national training ecosystem** can deliver. Combined with an ageing workforce, this means the sector must **expand entry pathways** for critical occupations and diversify its workforce to meet future demand.[4]

[3] AUSMASA, "Workforce Data Dashboard", 2025.
[4] CISCO, "Future of Australian Jobs Report", 2019. Cited in AUSMASA "Planning for success – adapting to transitions in the Mining industry", 2025.

About workforce planning

Workforce planning is the strategic centrepiece for AUSMASA and all JSC's. It informs all other functions by guiding the understanding of current and future workforce needs. This approach ensures that both industries and workers remain agile and responsive to changing conditions. By leveraging data, research, stakeholder input, and insights, workforce planning further helps to diagnose issues, anticipate trends, and identify opportunities for alignment and development across entire industries.

AUSMASA shares its workforce planning output in two ways:

- the annual workforce plans (now referred to as the Workforce Insights Report) and
- the monthly research bulletin.

The Bulletin, available via the Research section of the AUSMASA website, highlights key topics in the automotive and mining sectors and includes case studies, dashboards, fact sheets, and other state-of-the-industry snapshots.

Figure 1: Workforce planning cycle for Workforce Plan 2027

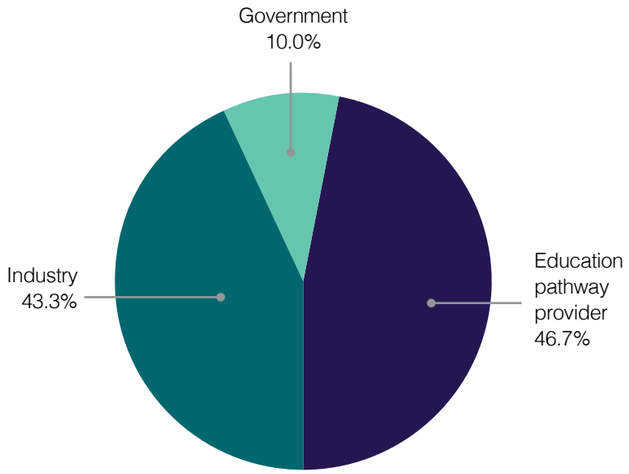
Workforce planning cycle	Intelligence gathering and research	Initial consultation	Targeted consultations	Collating, submission, publications, and launch	Implementation and monitoring
Timeline	Ongoing	Ongoing	September 2026 - February 2027	February 2027 - June 2027	Ongoing
What it involves?	• Stakeholder engagement and intelligence gathering • Ascertaining overlap with other federal/state bodies and JSCs • Establishing stakeholder needs and pain-points • Input from SWAPs to direct research and engagement • Update analysis and data dashboards	• Prepare Consultation Papers for stakeholder input • Establish key workforce challenges and industry level trends • Establish Prioritisation matrix and systematic approach to alleviating roadblocks	• 1:1s with industry stakeholders and SWAPs • 1:1s with industry stakeholders as identified by SWAPs • In-depth exploration of industry level trends and industry level challenges • Detailed mapping of workforce and appropriate pathways and solutions that align with industry needs	• Internal review for Workforce Plan • SWAP feedback on Workforce Plan • Final tweaks and design editing • Final 1:1s with SWAPs to tie off any pending action items • Submit Workforce Plan to DEWR and provide further information as needed	• Promotion, collaboration, and coordination across stakeholders to communicate Workforce Plan findings • Develop suitable industry-led solutions • Engage stakeholders to monitor the success of the development and implementation phases • Close off feedback loop and report on the success of above initiatives
Who do we talk to?	Strategic Workforce Advisory Panel (SWAP) | Employers | Individual Industry Association and Peak Bodies | Industry stakeholders | Pathway Providers (VET & Higher education)		Government | JSCs | Unions		
How do we communicate?	Meetings	Roundtables	Emails	Summits	LinkedIn Website Webinars Conferences

Our Workforce Planning and Policy team drives our data, workforce planning, policy, and research, and is part of our stewardship functions. It focuses its work on three core pillars: research, engagement, and amplification. Engagement with stakeholders to inform and direct research, and amplification to promote and activate the rigorous research that has been done. All three pillars are activated and implemented throughout the year to continuously direct and tighten the focus and impact of these functions (Figure 1).

Approach to consultation and key groups

Our 2026 workforce planning consultations spanned 4 in-person roundtables and one online roundtable across Darwin, Perth, Brisbane, and Melbourne. Across these, we undertook over 150 consultations and received over 100 written submissions. This included feedback from managers, directors, operational, and executive-level staff across training providers, government representatives, unions, industry groups, and peak bodies (Figure 2).

Figure 2: Type of stakeholders AUSMASA consulted for the Workforce Insights Report 2026



First Nations

AUSMASA is committed to advancing First Nations employment by working with industry to better understand and support the design and understanding of pre-employment and training programs tailored to First Nations communities. These programs are essential for fostering participation and success in the years ahead. AUSMASA will continue to research this space and further engage with First Nations organisations to better understand the nuances around the opportunity. We have outlined our planned First Nations consultation strategy and invite stakeholder feedback, including opportunities to collaborate (Figure 3).

Figure 3: First Nation's Consultation Plan

First Nation's Consultation Plan	Intelligence gathering	Consultation and engagement	Research	Amplification and Implementation
Timeline	Ongoing	April 2026 - Ongoing	June 2026 - Ongoing	February 2027 - Ongoing
What it involves?	• Scoping and designing engagement • Building relationships • Defining research, data, and communication protocols • Collating lists of relevant stakeholders Initiating contact	• Engage First Nations Advisory forums and advisory groups • Direct research efforts • Access and collate data sources • Engage with key stakeholders • Enable intelligence gathering channels • Enable ongoing intelligence gathering channels	• 1:1s with industry stakeholders and SWAPs • 1:1s with industry stakeholders • In-depth exploration of industry level trends and industry level challenges • Detailed mapping of workforce and appropriate pathways and solutions that align with industry needs • In-depth research and analysis	• Publish findings • Publish recommendations • Explore and coordinate implementation challenges • Amplify process improvements • Amplify system improvements • Impact tracking (including utilisation monitoring) • Coordinating intelligence
Who will we talk to?	Community led organisations | First Nations Peak Bodies | Indigenous Educators and RTOs		CoE for Indigenous Futures | Coalition of Peaks | JSA First Nations Cultural Advisory Panel	
How do we communicate?	Meetings	Roundtables LinkedIn Website	Webinars	Conferences
Considerations	Building trust | Engagement fatigue | Workplace barriers		Lack of data availability | Sustained engagement | Access challenges	

First Nations

First Nations people comprise 4.6% of the mining workforce, higher than the 2.6% average for all industries (Figure 4).[5] Mining consistently records higher First Nations participation than all other sectors, with sub-sectors such as Coal and Metal Ore Mining setting the benchmark at over 5% of First Nations workers (Table 1). This mainly points to the co-location of mines and the places where First Nations communities live, mostly in Queensland (QLD) and Western Australia (WA). In comparison, Automotive sits below the national average at 2%, and most First Nations workers in the Automotive industry work in the eastern states. First Nations workers are concentrated in core production roles, but they also hold notable positions in supervisory and technical roles.

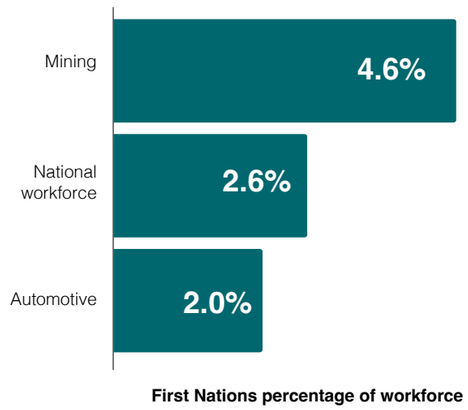
A significant proportion of First Nations workers in the mining sector is concentrated in Coal Mining and Metal Ore Mining, accounting for over 76.9% of all mining First Nations workers in these sub-sectors. Similarly, over half of all First Nations workers in the automotive sector work in repair and maintenance. At the same time, First Nations women's representation is relatively low in these sectors. First Nations women make up 27.6% of the total First Nations workforce in Oil & Gas on the mining side, and in Automotive Retail on the automotive side. There is an opportunity to improve First Nations female participation beyond these two sub-sectors.

First Nations Australians represent 12.3% of Mining apprentices and trainees, compared to the 6.1% average for all industries.[6] Across both enrolments and completions, RII consistently attracts greater numbers, largely due to the co-location factor mentioned above. First Nations enrolments in RII consisted of 7.6% of all enrolments and 9.8% of completions across 2015 to 2024. RII is structurally positioned as a stronger vocational pathway for First Nations learners (Figure(s) 5 & 6).

In contrast, the AUR and Automotive industry Manufacturing (AUM) pathways have lower participation from First Nations learners, with lower enrolments and completions, both in absolute terms and relative to non-First Nations learners, especially compared to the RII pathway. Although AUR's First Nations completions and enrolments are growing. AUM has low enrolments and completions and appears to be the least common entry pathway. AUR and RII training packages display stability in both enrolments and completions. The overall trend suggests a high level of engagement and follow-through for First Nations participants in automotive pathways, despite year-to-year variability in numbers.

The Automotive sector's relatively low First Nations participation suggests there may be structural or cultural barriers to access. There is scope to research employer recruitment and retention behaviours, apprenticeship availability and perception of trade pathways in First Nations communities. There may be an opportunity to scale growth in AUR enrolments and completions through targeted interventions, such as mentoring programs, community-based pre-training, and culturally responsive apprenticeship models.

Figure 4: Proportion of First Nations workforce by industry, 2021



Source: ABS Table Builder 2021 Census—employment, income, and education.
Note: The proportion of the Automotive industry has been calculated by averaging the 3-digit ANZSIC groups covering the industry.

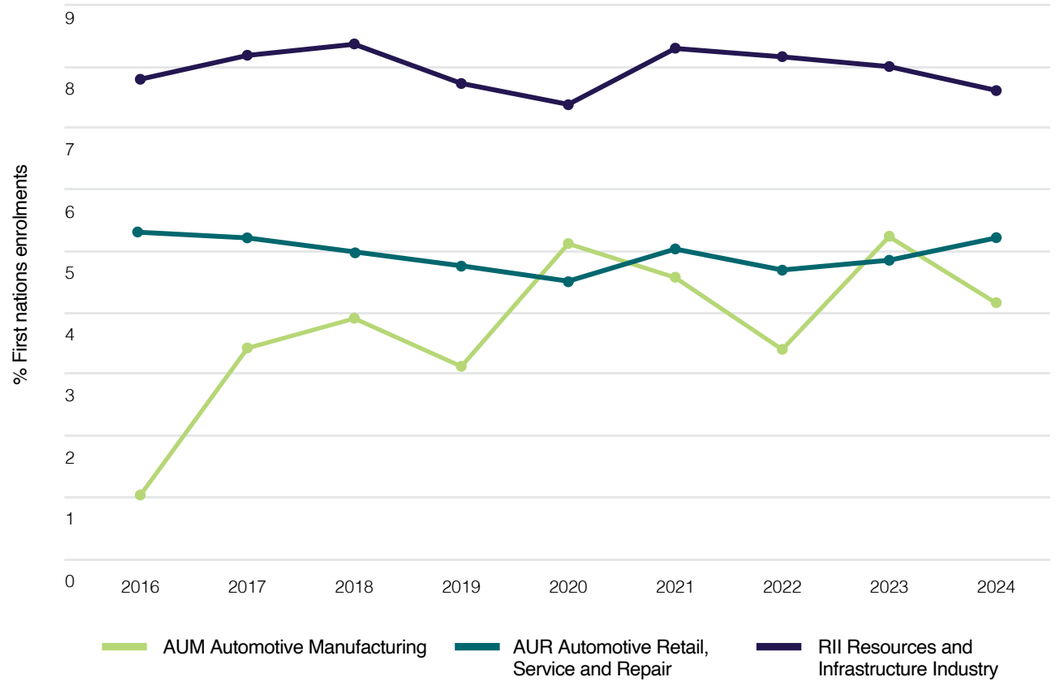
Table 1: Percentage of First Nations employees by sub-industry, 2021

Sub-industry	First Nations percentage of total workforce	Female proportion of First Nations workforce
Coal Mining	5.5%	20.9%
Oil and Gas Extraction	3.2%	27.6%
Metal Ore Mining	5.2%	23.2%
Non-Metallic Mineral Mining and Quarrying	3.8%	16.4%
Exploration and Other Mining Support Services	2.6%	16.5%
Mining total	**4.6%**	**21.8%**
Automotive Repair and Maintenance	2.3%	12.4%
Motor Vehicle Parts and Tyre Retailing	2.3%	29.7%
Motor Vehicle Retailing	1.6%	27.4%
Motor Vehicle and Motor Vehicle Parts Wholesaling	1.5%	16.2%
Motor Vehicle and Motor Vehicle Part Manufacturing	1.4%	11.5%
Automotive total	2.0%	16.8%
National workforce	**2.6%**	—

Source: Australian Bureau of Statistics, 2021 Census; Indigenous Employment by Industry, 2023.

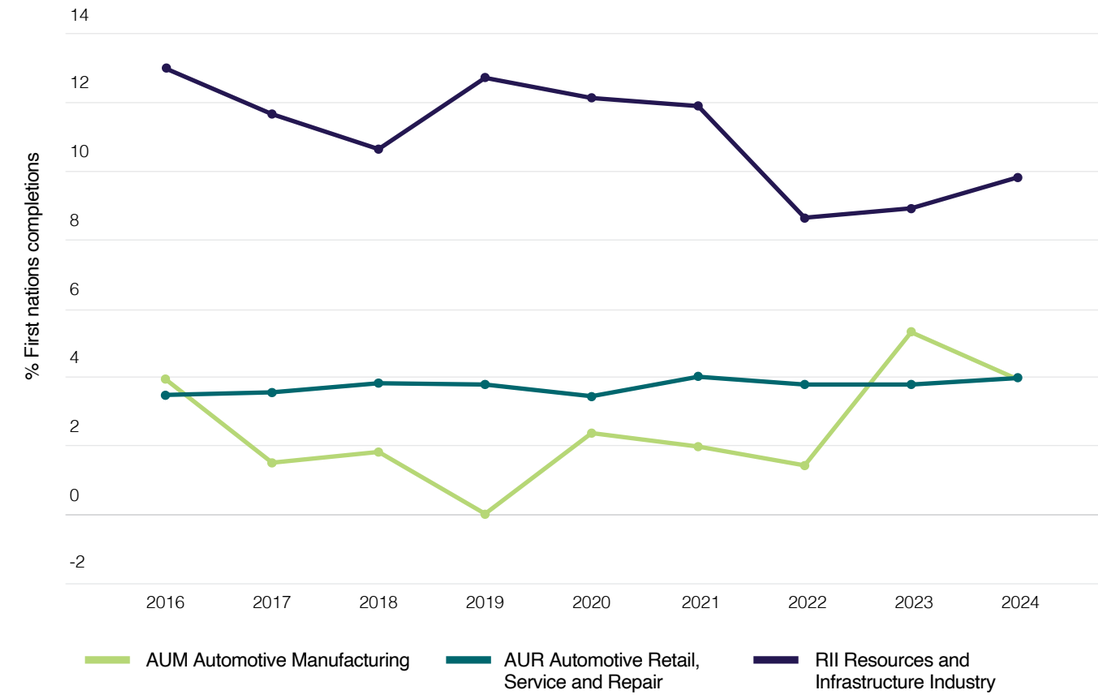
[5] Australian Bureau of Statistics, "2021 Census - DataBuilder - Indigenous Employment by Industry", 2023.
[6] NNCVER, Apprentices and trainees 2023 - March quarter DataBuilder, Contract status, Employer industry 2-digit by Indigenous status, 2023..

Figure 5: Percentage of First Nations students enrolments for RII, AUR and AUM, 2016–2024



Source: NCVER VOCSTATS, "TVA program enrolments 2015-2024", 2025.

Figure 6: Percentage of First Nations students Completions for RII, AUR and AUM, 2016–2024



Source: NCVER VOCSTATS, "TVA program completions 2015-2024", 2025.

Key trends in the Mining industry

Australia's Mining industry is undergoing a structural transformation, shaped by shifting global demand, technological change, and evolving workforce expectations. Mining remains a cornerstone of the national economy and a major regional employer. The sector is increasingly transitioning towards critical minerals, automation, electrification, and low-emissions operations. Industry is responding to these underlying trends alongside demographic headwinds, regional constraints, evolving pathway needs, and additional constraints required across the life of a mine.

These trends are occurring alongside heightened expectations around environmental stewardship, community engagement, and long-term regional sustainability. As mines progress through development, operation, care and maintenance, and closure phases, workforce needs become more dynamic and increasingly interconnected with broader economic and social outcomes. At the same time, persistent skills shortages, misalignment of the training system, and evolving occupational profiles are placing pressure on employers seeking to attract, retain, and develop a future-ready workforce.

The following section outlines the key trends shaping Australia's Mining industry, highlighting the workforce, skills, and structural factors that will influence productivity, regional resilience, and the sector's ability to support emerging industries and the global energy transition.

Regions are key for the Mining workforce

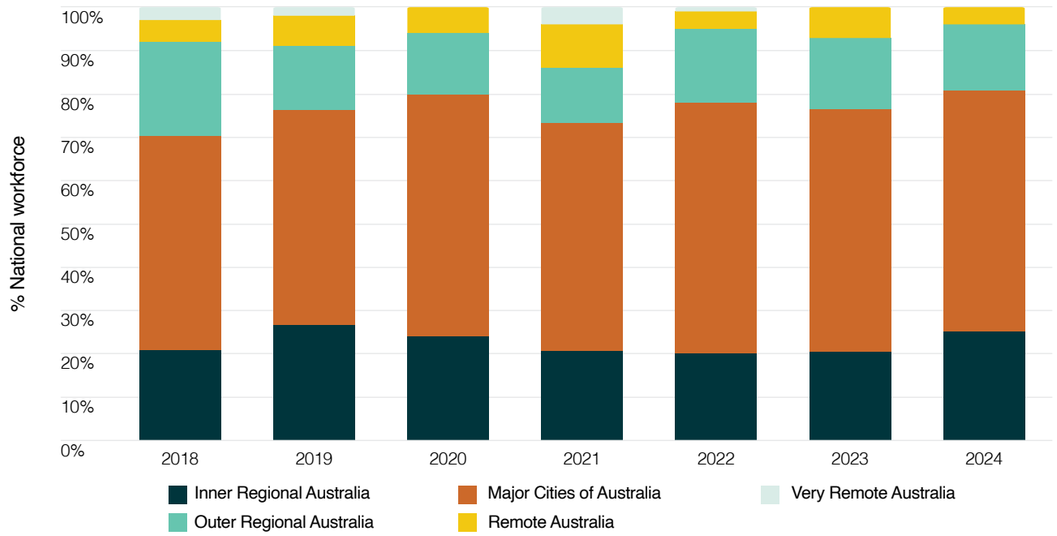
Tags: regional workforce, skills shortages, and education pathways

The majority of mining activity occurs in the regions. However, the regions face exacerbated challenges in retaining, attracting, and recruiting skilled workers (Figure M1). Supply constraints, such as inadequate levels of training services/facilities and trainers, are also amplified in the regions, with employers having to rely on in-house (enterprise) and other informal training to upskill workers. Geographic distance can also make it harder for workers to find adequate housing and services (hospitals, schools, etc.) in proximity. As a result, retention is more likely to be short-term.

This highlights the importance and implications for:

- **government:** coordinating regional education and training infrastructure and trainer capability
- **industry:** coordinating regional workforce strategies with government, including housing, community infrastructure, and local training partnerships
- **pathway providers:** developing flexible programs that allow workers to train while working in regional locations.

Figure M1: Mining workforce share by remoteness, 2018–2025



Source: Australian Bureau of Statistics, "Education and Work, Australia, Customised Table, May 2025", 2025.

There is strong and growing demand for higher education-aligned occupations

Tags: higher education, productivity, AI, education pathways, and critical minerals

A significant decline is projected in demand for several of Mining's larger occupations; however, jobs like Mining Engineers, Metallurgists, Geologists, and Geophysicists, which are less susceptible to automation, are projected to have growing demand (Figure M3).[7] With various universities having closed their Mining Engineering programs, the pipeline of qualified candidates for such occupations is expected to shrink.[8,9] Industry is calling for more flexibility in pathways and a culture of lifelong learning that allows individuals to adapt and grow.

The mining engineering occupation faces significant supply challenges that have wide-ranging impacts on the industry. Constricted talent pipelines can delay feasibility studies, mine planning, and operations, ultimately increasing costs, reducing productivity, and heightening safety risks. As experienced engineers retire, replacing them becomes increasingly difficult, posing challenges for technical expertise, leadership, and Australia's ability to scale up the clean energy sector, which relies on critical minerals such as lithium, copper, and rare earth elements.

These challenges are compounded by the limitations of the higher education ecosystem. Its relatively decentralised structure makes it difficult for academia to respond quickly to the cyclical nature of the Mining industry and to fluctuations in industry demand. Innovative and flexible training pathways will be required to maintain a reliable supply of skills. Flexible pathway solutions are needed that can be delivered by universities, RTOs, or employers, to provide a responsive, adaptable pipeline that aligns more closely with industry needs, and can reduce skills shortages, and support productivity outcomes.[10]

This highlights the importance and implications for:

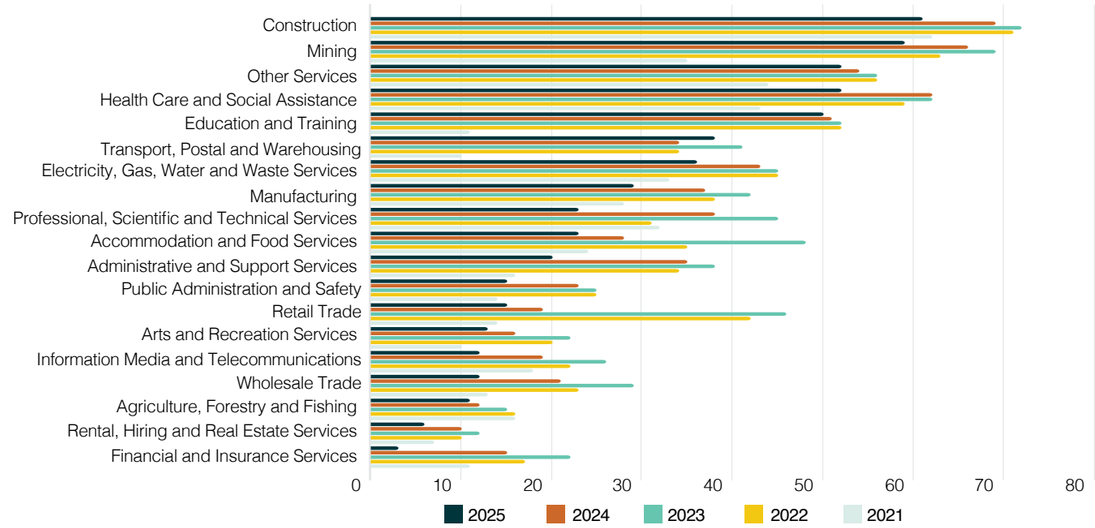
- **government:** coordinating improvements in aligning higher education policy and industry workforce needs
- **industry:** partnering with universities and training providers to rebuild pipelines in mining engineering and geosciences
- **pathway providers:** expanding stackable qualifications for emerging technical roles to anticipate industry needs
- **unions:** supporting professional development for workers transitioning into technical and supervisory roles.

Critical Minerals and Strategic Materials will shape the future of the industry

Tags: critical minerals, sovereign capability, renewables, and advanced materials

Demand for critical minerals and strategic materials is projected to grow in tandem with the growing needs of the Advanced Manufacturing, Space, MedTech, and Renewables industries. As a result, the critical minerals workforce in Australia is expected to increase by 8,900 jobs across 40 planned mining projects. The composition of the critical minerals workforce largely mirrors the Mining workforce, meaning the industry will face acute skills shortages.[11]

Figure M2: Workforce shortage (%), by industry, 2021–2025



Source: Jobs and Skills Australia, "Occupation Shortage | Jobs and Skills Australia", October 2025.
Note: The percentage is weighted by each occupation's employment within each industry, calculated by Jobs and Skills Australia.

7 AUSMASA, "Technological Advancement and the Evolution of Skills", 2025.
8 ABC News, "Federation University scraps one of Australia's oldest geology courses", 2025
9 Mining.com.au, "Mining talent crossroads: Geoscience "off student radars", 2025.
10 AUSMASA, "Restoring the higher education mining skills pipeline", 2026.
11 AUSMASA, "Planning for success – adapting to transitions in the Mining industry", 2025.

The cost of processing and beneficiation of critical minerals impacts their feasibility compared to other, more conventional minerals (iron ore, coal). Such disincentives will need to be addressed if the Mining industry is to meet growing demand for critical minerals and support growth in downstream industries. In conjunction with increased automation and electrification, the industry will also look to the higher education stream to supply a greater proportion of the workforce, including Mining Engineers, Geologists, and Geophysicists.[12]

Critical minerals need a separate ANZSIC identifier

The lack of a separate ANZSIC category for critical minerals results in inconsistent data and reporting on the industries relevant to them. As a result, it is complicated to conduct accurate economic or econometric analysis of these industries and the effects of various government plans and initiatives. A separate category, either a class or a group, under the Mining ANZSIC Division B for critical minerals, is needed to enable this work.[13]

This highlights the importance and implications for:

- **government:** supporting workforce strategies aligned with critical minerals policy and industrial policy
- **government:** updating statistical classifications for critical minerals to improve labour market measurement
- **industry:** collaborating with downstream industries to build integrated supply chains and scale workforce planning activities
- **pathway providers:** strengthening STEM pipelines linked to emerging industries.

Skills supply has been constrained because of a potential misalignment between industry needs and the national training ecosystem

Tags: education pathways, training product maintenance, and productivity

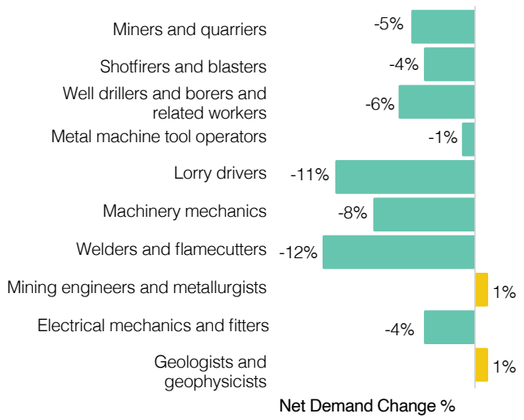
Mining has some of the most acute skills shortages in the country, with 68.5% growth in shortages between 2021 and 2025 (Figure M2), ranking third after the education and transport industries. The shared use of similar occupations across the construction industry heightens competition for workers with comparable skills, particularly as both the construction and mining sectors are expected to experience the most significant occupational shortages.[14]

These shortages are exacerbated because of misalignment between industry expectations and the national training package. High equipment costs and OEM-specific training requirements limit RTOs' ability to deliver at scale, slowing workforce supply.[15]

This highlights the importance and implications for:

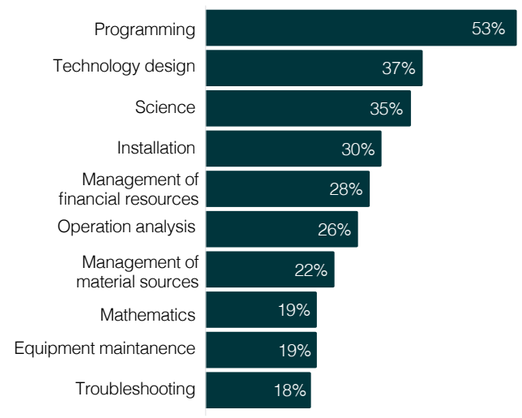
- **government:** enabling collaboration and support for high-cost training infrastructure
- **industry:** supporting shared training infrastructure where equipment costs are prohibitive
- **pathway providers:** exploring shared equipment facilities and industry partnerships to reduce delivery costs.

Figure M3: Net demand change for top 10 mining jobs, 2018–2028



Source: CISCO, "Future of Australian Jobs Report", 2019.

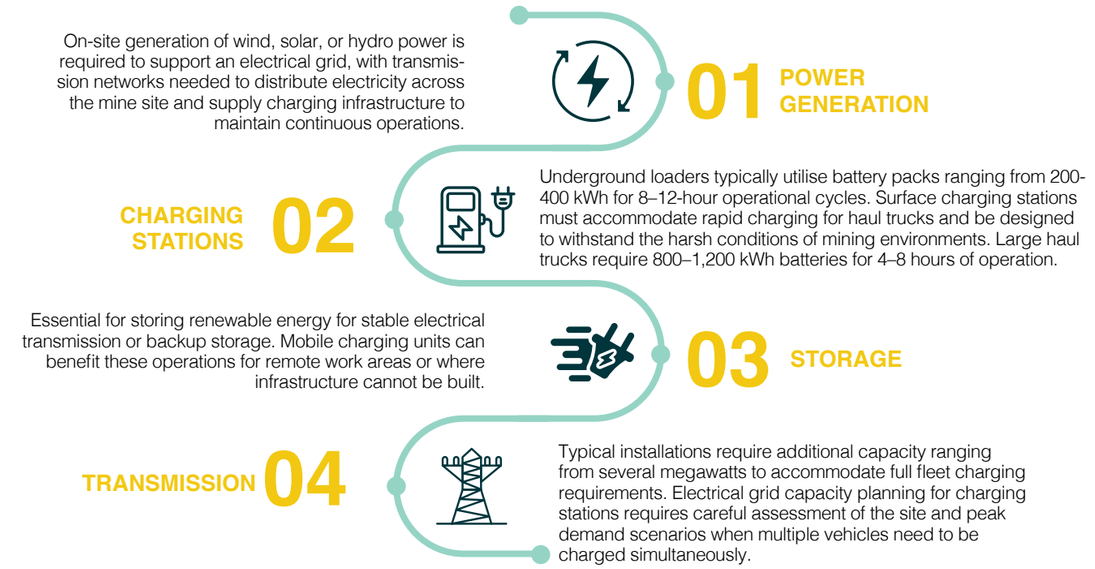
Figure M4: Top 10 skill gaps for new mining sector entrants 2019



Source: CISCO, "Future of Australian Jobs Report", 2019.

12 AUSMASA, "Planning for success – adapting to transitions in the Mining industry", 2025.
13 AUSMASA, "Critical Minerals in ANZSIC - Letter to the ABS", 2025.
14 Jobs and Skills Australia, "2025 OSL Additional Insights Report", 2025.
15 AUSMASA, "Skills shortages in Mining and the RII junction", 2025.

Figure M5: Infrastructure needed for an electrified mine site



Source: GMG, "Recommended Practices For Battery Electric Vehicles in Underground Mining", 2023.

Technological advancement in the industry has led to increased demand for digital and diagnostic skills

Tags: digitalisation, industry 4.0, and technological advancement

The current mining workforce faces significant skills challenges, with acute shortfalls among new entrants. Talent gaps are particularly pronounced for roles requiring programming, installation, mathematics, and troubleshooting, reflecting the increasing diagnostic demands of modern mining equipment, especially for autonomous and remote operations (Figure M4). These skills gaps, combined with safety concerns, risk-averse workplace cultures, and incompatible equipment standards, create barriers to adopting technology-driven practices and transitioning to low-emission operations.[16]

This highlights the importance and implications for:

- **government:** supporting the inclusion of digital skills development within vocational and higher education systems
- **industry:** strengthening digital capability across the workforce
- **pathway providers:** delivering stackable and modular training for such skills.

Electrification requires innovative solutions and consideration for micro-grids

Tags: decarbonisation, electrification, net zero, and battery innovation

Electrification is a key Net Zero and productivity lever for the Mining industry; it can deliver safety, cost, and emissions benefits. However, there are barriers around infrastructure, mine design, charging, and grid stability. Electrification requires a comprehensive set of solutions, including Net Zero applications, microgrids, and other renewable technologies, to ensure the transition reduces emissions rather than shifting them upstream/downstream (Figure M5). This move will require coordinated efforts and planning to ensure the skills ecosystem moves in tandem and serves as an enabler rather than a bottleneck.[17]

This highlights the importance and implications for:

- **government:** aligning energy policy, infrastructure planning, and workforce development
- **industry:** coordinating workforce solutions with upstream and downstream industries
- **unions:** supporting workforce transition pathways as energy systems change.

16 AUSMASA, "Technological Advancement and the Evolution of Skills", 2025.
17 AUSMASA, "Electrification in mining: Infrastructure, skills and the road to Net Zero", 2026.

Closure of mines requires specific skills, particularly in connection with land rehabilitation

Tags: circular economy, net zero, and education pathways

At present, 25.0% of mine sites in Australia are classified as being in care and maintenance, with 53.5% in WA.[18] Throughout its life, a mine will require varying combinations of skills, although there is considerable overlap; the volume of each skill can vary significantly at times.[19] There is a particular focus on skills relevant to project management, environmental management, planning, ecological rehabilitation, and community stakeholder engagement. Many of these roles are managerial, supervisory, or advisory. However, the care and maintenance stage does not always lead to closure. There are instances of mines being brought back into operation depending on commodity prices.

Significant research and stakeholder engagement are required to better understand industry and community needs regarding handover, land rehabilitation, and ecological preservation, particularly with a First Nations and community stewardship lens.

Tailings dam safety management is another aspect within mine closure planning. Tailings dams are a fundamental infrastructure component of mining operations, storing byproducts across the life of a mine. As more mines approach closure, the safe management, monitoring, and rehabilitation of tailings storage facilities is becoming increasingly consequential. Despite this, there are no nationally accredited units within the RII training package around safety management at the supervisory or governance/engineering tier.

This highlights the importance and implications for:

- **government:** supporting regional economic diversification programs
- **industry:** incorporating workforce transition planning into mine lifecycle management
- **unions:** supporting job transition, support and redeployment opportunities.

Succession planning has become key to unlocking ongoing economic stability

Tags: AI, management or supervision upskill, and productivity

The Mining industry confronts social and operational challenges as it navigates technological transformation. Job displacement and redundancies raise questions about maintaining a social licence to operate, with 44% of top global mining companies' executives identifying maintaining social licence as a top business risk.[20] Meeting community expectations while implementing automation, AI, and data-driven innovation requires stronger collaboration between industry and pathway providers, investment in future-ready workforce skills, and shared infrastructure. Overcoming these barriers is critical to unlocking productivity, supporting regional communities, and maintaining the sector's position as a global leader in sustainable, technologically advanced mining.[21]

Without transition strategies, communities risk unemployment, underutilisation of skills, and economic downturns, as other local industries are often unable to absorb displaced workers. These issues are particularly acute in tight labour markets already facing skills shortages, limiting productivity and regional economic resilience. Policy and skills gaps further exacerbate the problem, leaving both industry and communities exposed to unintended negative consequences. Succession planning can help alleviate some of these challenges.

This highlights the importance and implications for:

- **government:** improving and enabling coordination between industry, workforce, and regional development strategies
- **industry:** developing long-term workforce succession planning across mine lifecycle stages through engagement with regional and co-located communities
- **unions:** supporting communities affected by automation and mine closures.

[18] Geoscience, "Australian Operating Mines Map 2024", 2024.
[19] AUSMASA, "Planning for success – adapting to transitions in the Mining industry", 2025.
[20] Mining.com, "Miners rate social licence, climate change as top concerns. Really?", 2019.
[21] AUSMASA, "Technological Advancement and the Evolution of Skills", 2025.

Mental health remains a key challenge for the industry

Tags: safety, productivity, and management

The incidence of mental health has increased in the Mining industry (+9ppt in the decade up to 2023) (Figure M6). The nature of mining, particularly fly-in, fly-out (FIFO) work, is defined by long working hours, physical strain, isolation, and high-pressure environments. Such factors continue to impact mental health due to extended periods away from loved ones, social disconnection and limited downtime.

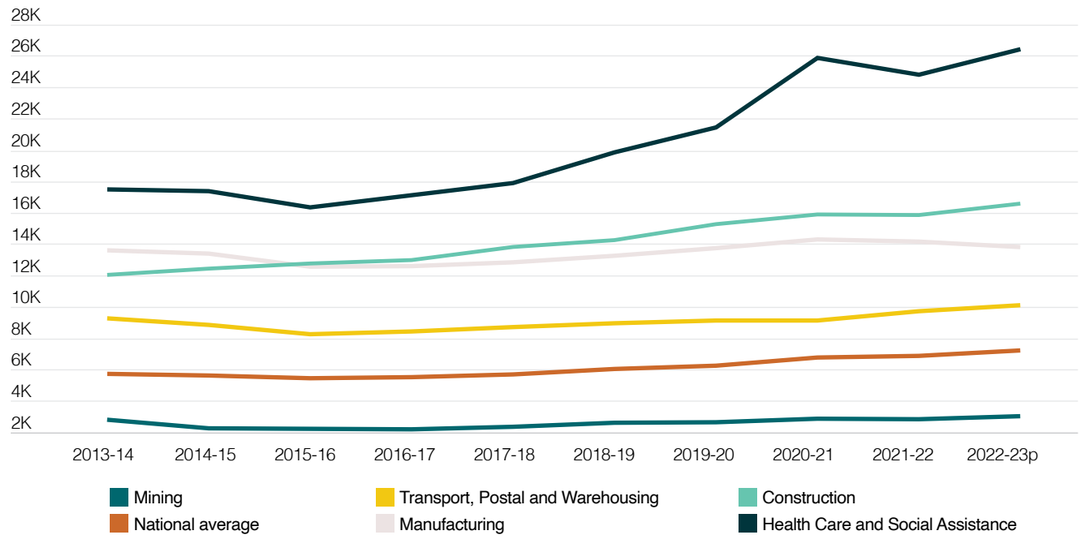
Workplace stress has been indirectly linked to employee health and self-harm, as it often contributes to negative health behaviours such as smoking, poor diet, lack of physical activity, and alcohol consumption. Individuals facing mental health challenges may experience reduced attention, difficulty focusing on tasks, and fatigue, all of which contribute to decreased performance and increased time off work.[22] This, in turn, affects the productivity of the workforce and the industry.

It is harder for employers to recruit, attract, and retain a skilled workforce due to perception challenges and a lack of awareness about the industry amongst younger workers, challenges compounded by FIFO work lifestyles.

This highlights the importance and implications for:

- **government:** supporting research and prevention initiatives targeting high-risk occupations
- **industry:** establishing mental health support programs and enabling workplace culture improvements.

Figure M6: Mental health-related compensations across industries, 2013–2023



Source: SafeWork, "Workers' compensation", 2023.

[22] AUSMASA," Mental health in the Mining industry", Upcoming Publication.

Gender representation in the Mining industry

In recent years, the Mining industry has seen gradual increases in female workforce participation, with a range of employer initiatives and government policies promoting a better gender balance, alongside workplace changes to attract more diverse workforces (Figure M7). Some educational programs and scholarships for women and non-binary people in Science, Technology, Engineering, and Mathematics (STEM) fields, like the Australian Academy of Technological Sciences & Engineering's (ATSE) Elevate program, have played a key role in fostering this.[23] Such programs can provide scholarships, mentoring, and leadership opportunities to help close gender gaps. Further, employer-led initiatives, such as a focus on more flexible parental leave and work options, have also assisted. For example, BHP's targeted efforts have seen women's representation in their workforce rise to 37%.[24]

The age distribution of the industry's workforce may also reflect gender-related trends. In 2023, male employment was highest in the 35–44-year age range, while for females it was in the 25–34-year age range – suggesting more recent increases in younger women's workforce representation, which is both positive but may also reflect gendered issues like unpaid caregiving and other responsibilities later in life.[25] The Mining industry also remains predominantly male across key occupations. For example, the Drillers, Miners and Shot Firers occupation included 51,600 males and 6,700 females, while Metal Fitters and Machinists had 27,400 males and 1,600 females.[26]

Some occupations have seen growth in female employment, however. 1,200 women became Drillers, Miners and Shot Firers between 2016 and 2021, while 1,000 became Other Building and Engineering Technicians.[27] Industry-wide efforts, like AusIMM's Women in Mining Network also further these outcomes.[28] Such initiatives, alongside employer-specific programs and flexibility, like those offered by BHP, look to be helping to improve gender diversity.[29] Consequently, while the industry remains largely male-dominated, key peak bodies and employers are charting a course towards higher workforce participation and more leadership opportunities for women.

Sector-level trends

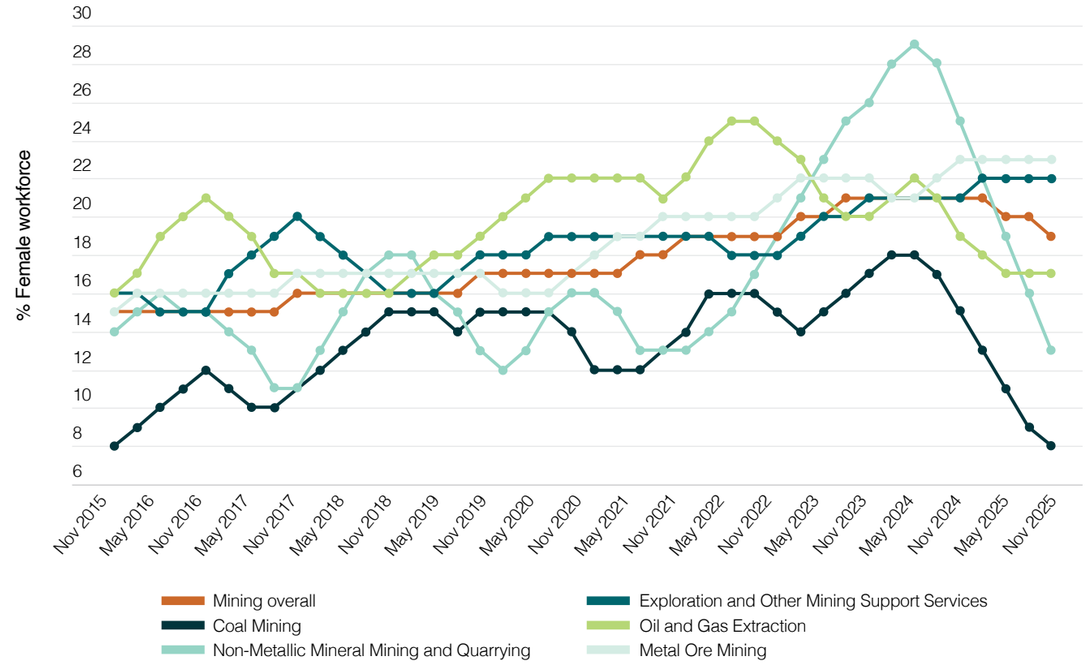
All sectors of the Mining industry have experienced increases in the number of female workers, leading to a gradual shift towards improved gender representation:[30]

- **Metal Ore Mining**'s share of female workers rose from 15.5% in August 2015 to 22.8% in November 2025.
- **Coal Mining**'s proportion of female workers fluctuated but also increased, from a baseline of 8.2% in August 2015 to almost 18.3% by May 2024. However, it fell back to 7.8% in the latest quarter, November 2025.
- **Non-Metallic Mineral Mining and Quarrying** sector experienced fluctuation over a decade in female representation. It increased from 14.1% to 28.6% by May 2024 and then fell back to 13.3% in November 2025.
- **Exploration and Other Mining support Services** had gains in female workforce representation from 16.2% in August 2015 to 22.3% in November 2025.
- **Oil and Gas Extraction**'s female representation fluctuated over time, increasing from 16.2% in August 2015 to a peak of 25.1% in August 2022 before declining to 16.5% in November 2025.

Taken together, these trends suggest that three of the Mining industry's core sectors have made gradual and, at times, swift steps towards a more diversified workforce.

23 Department of Industry, Science and Resources, "256 STEM scholarships for women and non-binary people in STEM", 2024.
24 BHP, "Inclusion and diversity", 2025.
25 Chief Executive Women, "Addressing Australia's Critical Skill Shortages: Unlocking Women's Economic Participation", 2022.
26 AUSMASA, "Gender Representation", 2025.
27 AUSMASA, "Gender Representation", 2025.
28 AUSMASA, "Gender Representation", 2025.
29 AUSMASA, "Gender Representation", 2025.
30 Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Figure M7: Proportion of female workforce, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, 2025; Trended by AUSMASA.

Key trends in the Automotive industry

Australia's Automotive industry is undergoing rapid change as electrification, digitalisation, and new policy settings reshape both the vehicle market and the workforce. Growth in plug-in hybrid and electric vehicle adoption, supported by initiatives such as the National Vehicle Efficiency Standard (NVES) and targeted investment, signals a gradual shift away from traditional petrol vehicles. The war in Iran and the resulting supply-side inflationary shocks have increased interest in EVs among households and businesses.[31]

Advances in autonomous systems, advanced driver-assistance technologies, and connected vehicles are transforming how vehicles are serviced, repaired, and maintained. These developments are occurring alongside longstanding workforce challenges, including skills shortages, lower apprenticeship completion rates in AUR since 2012 (despite upwards trends since 2017), and limited trainer capacity. The transition to electrified and software-enabled vehicles is increasing demand for digital, diagnostic, and high-voltage capabilities, while training and licensing systems must adapt to remain practical and risk-proportionate.

The Automotive industry also faces challenges related to low Recognition of Prior Learning's (RPL) and the inability to accurately track and identify the industry due to the lack of an Automotive ANZSIC identifier. Without a clear statistical boundary around the industry, it is difficult to measure employment, productivity, skills shortages, or training outcomes with precision. Together, these structural limitations reduce visibility of the industry's true economic footprint and hinder evidence-based workforce planning.

Electrification is reshaping Australia's automotive workforce

Tags: decarbonisation, electrification, technological advancement, and battery innovation

With NVES taking effect from 2025, Plug-in Hybrid Electric Vehicles (PHEVs) entered a period of outsized growth, as PHEVs sales rose by over 170.5% in the year to January 2026, with hybrid vehicles accounting for 17.4% of all sales.[32] New zero-emission buses (ZEBs) accounted for 18% of sales in 2025.[33] As Electric Vehicle (EV) sales remained stable at around half of this level, the market is clearly making some initial moves away from petrol-only vehicles.[34] At the same time, the Government's National Reconstruction Fund Corporation (NRFC) has made its first automotive investment of $30.7 m, in a Melbourne manufacturer of autonomous electric vehicles used in mining and logistics.[35] An investment likely to have a positive impact on driver shortages, but will compete with existing businesses in the skills space.

There is a critical shortage of electrical skills in the Automotive industry, with fill rates sitting at 41% for EV technicians, despite the current Australian "carpark" consisting of less than 1% EVs (Figure A1). By 2050, Australia will need between 6,500 and 10,500 EV technicians (or Automotive Technicians with the relevant electrical skills) (Figure A2).

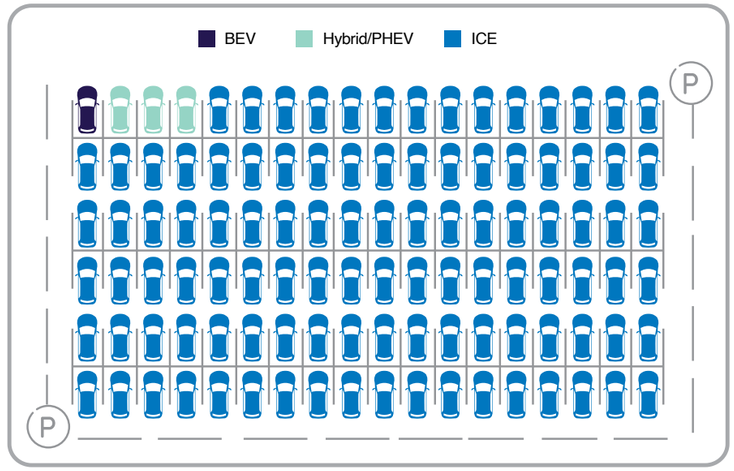
Structural pressures within the vocational education and training system, including training mismatches and barriers to RPL, further constrain workforce supply across both electrical and broader and more acute skills shortages faced by the industry.

This highlights the importance and implications for:

- **government:** aligning skills policy with emissions reduction and transport policy
- **industry:** planning workforce capability ahead of EV adoption growth
- **pathway providers:** map and enable pathways to enable circular function in the battery repurposing space.

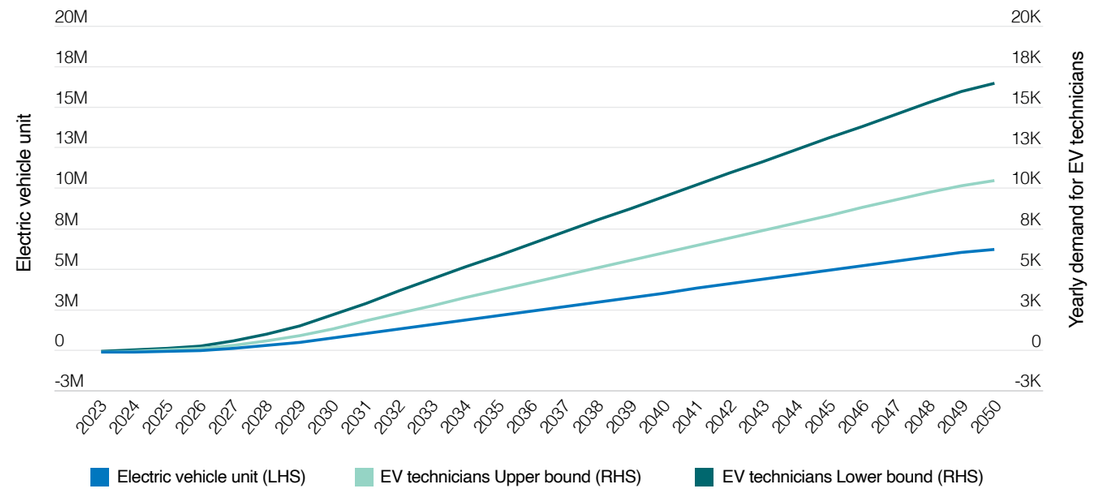
31 National Australia Bank, "EV interest surges 100% as fuel pressures bite Australians", 2026.
32 FCAI, "New vehicle sales steady in January 2026", 2026.
33 Bus Industry Confederation, "Meet in the middle of the ZEB transition", 2025.
34 FCAI, "New vehicle sales steady in January 2026", 2026.
35 NRF, "National Reconstruction Fund's first transport investment supports energy transition", 2026.

Figure A1: Australian carpark as of 31 January 2024



Source: Australian Automobile Association, "Electric Vehicle Index", 2025.

Figure A2: Projected EV Technicians demand by 2050



Source: AUSMASA, "BEV electrical licensing: Getting safety, skills and productivity right", 2026.

Technological advancements in the electrification space mean licensing can be a skills bottleneck or a productivity enabler

Tags: electrification, technological advancement, net zero, and safety

Technological advancements like ADAS and the adoption of EVs are reshaping the industry. Presenting a range of challenges, including insufficient EV infrastructure, varied licensing frameworks and limited training pathways.[36] For example, the Certificate III in Automotive Electric Vehicle Technology had 147 (mostly) new enrolments in 2024,[37] despite far higher and record EV sales at the time.[38] By 2050, Australia will need between 6,500 and 10,500 EV technicians (or Automotive Technicians with the relevant electrical skills) (Figure A2).

The lack of standardised EV training and recognition has created barriers to EV adoption and licensing, as jurisdictions have pursued and repeatedly reconsidered the role(s) of licensing, disrupting the industry.[39] Licensing is a complicated matter, given that an automotive technician can perform a large majority of repair and service tasks on an EV without coming into contact with high-voltage components; a blanket licence may not work in the industry. Any licensing conversation needs to be risk-proportionate, task-based, and evidence-led, because unintended workforce constraints may arise. Keeping this complexity in mind, AUSMASA has considered licensing design principles (Table A1).[40] Licensing may also disproportionately disadvantage smaller workshops, where technicians often perform a broad range of tasks and roles are less specialised. In contrast, larger workshops may be better placed to allocate EV-related work across dedicated roles or technician streams, making compliance with licensing requirements easier to manage.

Table A1: Licensing design principles

Licensing Design Principle	Statement
Evidence-based regulation	Licensing arrangements for EV technicians should be grounded in empirical safety evidence and real-world risk, rather than assumed electrical hazards.
Risk-proportionate controls	Regulatory controls should be applied in proportion to risk, with higher requirements limited to genuinely high-risk activities such as high-voltage battery work.
Task-based approach	Licensing should be applied at the task or activity level rather than imposed across entire automotive occupations.
Workforce and productivity protection	Licensing frameworks should avoid creating labour supply constraints, productivitybarriers, or cost pressures that could slow EV uptake or restrict repair capacity.
Pathway continuity	EV licensing should build on existing automotive trade qualifications and apprenticeships, supporting transition pathways rather than displacing establishedskills.
Industry-informed design	Licensing settings should be developed in consultation with OEMs, repairers, andindustry to reflect contemporary EV design and workshop practices.
Adaptive and future-ready frameworks	Licensing arrangements should be flexible and capable of evolving alongsidetechnological change and the EV battery life cycle.

Source: AUSMASA, "BEV electrical licensing: Getting safety, skills and productivity right", 2026.

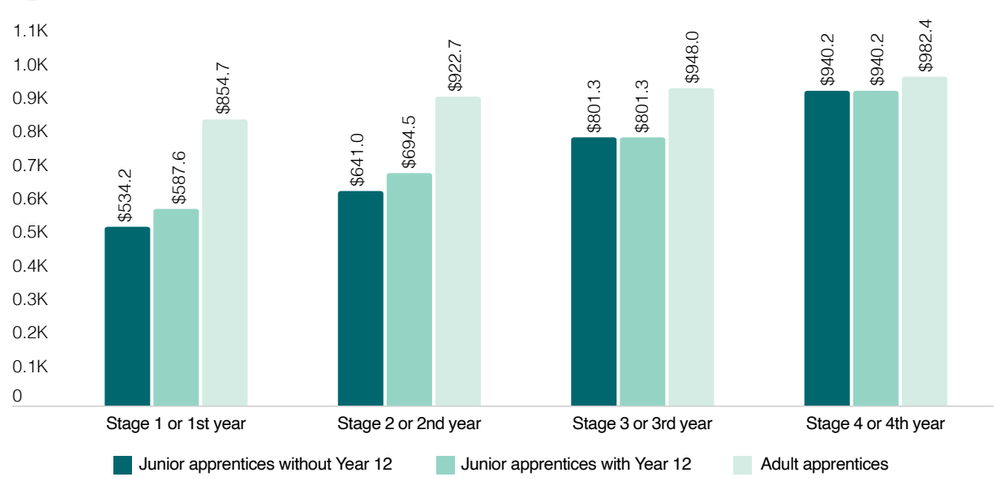
[36] AUSMASA, "On the road to electrification", 2025.
[37] NCVER, "Total VET program enrolments 2015–2024", 2024.
[38] AUSMASA, "The changing automotive landscape", 2025.
[39] AUSMASA, "On the road to electrification", 2025.
[40] AUSMASA, "The nuances of being an EV technician", 2025.

Table A2: Automotive occupation shortages, 2024

Occupation	Regional fill rate (%)	Metro fill rate (%)
Apprentice Mechanic / Technician	100%	46%
Tyre Fitter	50%	34%
Motor Vehicle Parts and Accessories Fitter (General)	46%	32%
Car Detailer	57%	57%
Vehicle Painter	29%	31%
Materials Recycler (Automotive Dismantler)	25%	28%
Motorcycle Mechanic / Technician	20%	25%
Motor Mechanic / Technician (General)	33%	40%
Diesel Motor Mechanic / Technician	22%	30%
Automotive Industry Average	33%	41%
Motor Vehicle Parts Interpreter / Automotive Parts Salesperson	50%	59%
Office Support Workers	33%	43%
Sales Representative (Motor Vehicle Parts and Accessories)	41%	55%
Panelbeater	16%	30%
Motor Vehicle or Caravan Salesperson	57%	77%
Vehicle Body Builder	9%	50%
Tow Truck Driver	20%	50%
Automotive Electrician	14%	46%
Electric Vehicle Mechanic / Technician	0%	43%
Customer Service Manager	25%	89%

Source: Deloitte, Regional and metropolitan fill rates by occupation, "Skills Shortages in the Australian Automotive industry," 2024. Note: RS: Regional Shortage; S: Shortage; NS: Not in shortage.

Figure A3: Automotive apprentice wage rates and progression, Vehicle Repair, Services and Retail Award, 2020



Source: AUSMASA, "Skills pipeline and the apprenticeship ecosystem", 2026.

This highlights the importance and implications for:

- **government:** ensuring licensing discussions are nationally consistent and risk-proportionate
- **industry:** engaging in policy discussions to ensure licensing frameworks reflect real workplace tasks
- **government:** avoiding regulatory settings that unintentionally constrain workforce supply.

There is a growing need for digital and electrical skills

Tags: digitalisation, productivity, education pathways or upkeep, and industry 4.0

In the Automotive industry, technological change is making digital capability increasingly important. As EVs, ADAS and other software-enabled vehicle systems become more common, Automotive Technicians, Autoglaziers and Panelbeaters need the skills to work with vehicle software, data and diagnostic tools. These capabilities are increasingly necessary to service, repair, and maintain modern vehicles, including undertaking precise calibration and validation processes, where required.[41] Such skills enable them to service, repair, and maintain modern vehicles, which typically require precise (re)calibration when serviced and,[42] importantly, immediately after accidents and subsequent repairs.[43] However, digital literacy gaps are believed to pose issues for occupations such as Panelbeater (Automotive Body Repair Technician), alongside some mid-career and mature-aged workers, warranting further research to clarify roles, tasks, and risks.[44] Gaps that need to be addressed to ensure ongoing work and enable productivity outcomes.[45]

The digitisation of the automotive workplace has outpaced the current training architecture. Diagnostic scan tools, OEM software platforms, digital multimeters, oscilloscopes, tablet-based service information systems, workshop management software, telematics platforms, and thermal imaging tools are now standard in modern workshops. Employers increasingly expect entry-level technicians to arrive with baseline competency in these tools as a workplace fundamental, not a specialist skill. However, digital diagnostic capability is fragmented across multiple elective units in the AUR training package, resulting in inconsistent skill development across the workforce.

This highlights the importance and implications for:

- **government:** supporting digital skills programs
- **industry:** supporting continuous learning to keep pace with rapidly changing technologies
- **pathway providers:** coordinating technological solutions in training and assessment with industry.

Critical skills are in short supply, particularly acute in the regions

Tags: regional workforce, management or supervision upskill, and productivity

Australia's automotive workforce is also changing and facing supply challenges linked with Vocational Education and Training (VET). A key issue has been an acute skills shortage, with shortfalls of nearly 28,000 skilled technicians and 14,000 apprentice vacancies as of 2024.[46] Such shortages are exacerbated by key demographic trends, such as completion rates that have declined more in AUR, since 2012, amongst adult-aged and mid-career apprentices.[47] Aspects of award-based pay and workplace challenges, such as workplace culture and a lack of mentoring, have also been identified as potential factors that negatively impact apprenticeship retention and completion (Figure A3).[48] At the same time, training mismatches, such as elective-heavy qualifications and differences between manufacturer credentials and VET credentials, can further limit apprentices' post-completion employability and future mobility.[49] Improvements in RPL, Recognition of Current Competency (RCC), mentoring programs, coaching, and targeted career development are showing some early promise.

This highlights the importance and implications for:

- **government:** supporting regional workforce development initiatives
- **industry:** improving mentoring, career development, and workplace practices to retain apprentices
- **pathway providers:** working with industry to improve apprenticeship completion rates
- **research:** explore alternative payment systems that represent ongoing skills acquisition post-qualification to shed light on retention and attraction trends.

41 AUSMASA, "The changing automotive landscape", 2025.
42 AUSMASA, "The changing automotive landscape", 2025.
43 AUSMASA, "Industry Workforce Plan: Moving ahead together", 2024.
44 AUSMASA, "The changing automotive landscape", 2025.
45 AUSMASA, "The changing automotive landscape", 2025.
46 Australian Automotive Aftermarket Association, "Strong Growth Ahead for Aftermarket Industry", 2024.
47 NCVER, "Apprentice & trainee 4-year completion rates in AUR – DataBuilder", 2026.
48 NCVER, "Issues in Apprenticeships and Traineeships -a Research Synthesis", 2021 Data used in AUSMASA, "Skills pipeline and the apprenticeship ecosystem", 2026.
49 AUSMASA, "Skills pipeline and the apprenticeship ecosystem", 2026.

Preparing the workforce of the future – apprenticeships, training, assessment, and the Right to Repair Scheme and TAE shortages

Tags: education pathways, training product maintenance or upkeep, and technological advancement

To deliver training and assessment without direction, including making assessment judgements, the person must hold one of the following credentials:

- TAE40122 Certificate IV in Training and Assessment or its successor,
- TAE40116 Certificate IV in Training and Assessment,
- TAE40110 Certificate IV in Training and Assessment,
- A diploma or higher-level qualification in adult education or vocational education and training.

In addition, they must also have a relevant qualification and maintain current industry skills and knowledge, which is regularly verified to demonstrate industry currency.[50] This poses challenges for technological advancements in EVs, ADAS and other automated systems, as trainers often shift into teaching after long careers spent working on different types of technology.[51] At the same time, RTOs face challenges in training and assessment due to the costs of OEM information and tools under the Right to Repair Scheme.[52] Licensing agreements can be restrictive, particularly for non-profit educational users, and RTOs cannot transfer licenses if a teacher retires or leaves.[53] Even when an RTO helps its trainers secure broad-based access through the Scheme, this can require them to navigate multiple OEM portals and manage short-term subscriptions, which is time-consuming and burdensome.[54] Complicated by a critical shortage in TAEs. AUSMASA has made recommendations to address this, including offering more affordable licensing options for RTOs, and continues to call for streamlining this process and reducing compliance burdens for industry.[55]

It is important to note that the Australian apprenticeship model allows individuals to train/learn and earn at the same time, compared to an average university degree, where they are unlikely to earn as they learn. However, there are still financial constraints that may constrict the apprenticeship supply pipeline.[56] Apprentices who start an apprenticeship one day before their 21st birthday will, by default, earn below the adult rate for their entire apprenticeship.[57] This may act as a major disincentive for the younger cohort, delaying their entry into apprenticeships and constricting the skills supply pipeline.

Cost-of-living pressures may also reduce apprenticeship uptake by making early-stage training wages harder to live on, especially for those who are not living at home or pursuing a mid-career change, potentially delaying commencements and constricting supply.

This highlights the importance and implications for:

- **government:** addressing apprenticeship wage structures and training incentives
- **industry:** improving access to OEM tools and training resources
- **industry:** enabling training and assessment collaboration with pathway providers to help mitigate TAE shortages by supporting secondment-type arrangements
- **government:** reducing administrative burdens under the Right to Repair Scheme for training providers.

50 AUSMASA, "Review of AURVTN120 Remove and replace major welded panels on vehicles", 2025. Stakeholder Feedback collected from the Consultation Stage.
51 AUSMASA, "Can RPL solve skills shortages", 2025.
52 AUSMASA, "Providing access to OEM information for the Right to Repair", 2025.
53 AUSMASA, "Providing access to OEM information for the Right to Repair", 2025.
54 AUSMASA, "Providing access to OEM information for the Right to Repair", 2025.
55 AUSMASA, "Providing access to OEM information for the Right to Repair", 2025.
56 NCVER, "Issues in Apprenticeships and Traineeships -a Research Synthesis", 2021.
57 AUSMASA, "Skills pipeline and the apprenticeship ecosystem", 2026.

RPL has untapped potential

Tags: management or supervision upskill, gender equity, RPL, and productivity

Skills shortages are a persistent concern for the Automotive industry. In 2023, 35% of 26 key Automotive occupations were in shortage.[58] Since the beginning of the pandemic, vacancy levels in automotive occupations have increased more than the national average, making it harder for automotive businesses to find skilled staff and apprentices (Table A2).[59]

There is the potential to unlock latent workforce supply and mitigate skills shortages in the Automotive industry through RPL. RPL can assist experienced, semi-skilled, and/or mature-age workers who are not formally (or fully) qualified to gain a full, nationally recognised qualification.[60] This can be particularly useful for industries facing shortages of skilled tradespeople, where a pool of 'latent supply' of potential workers exists but lacks up-to-date skills and/or qualifications. This includes:[61]

- female workers who might have temporarily exited the workforce for caring or childcare responsibilities and are looking to return to work
- people who might have gained skills or experience informally or on the job, and are looking to build on those skills by upskilling, and avoid duplication of training
- those with relevant prior skills, such as migrants with overseas experience, or someone with years of hands-on work experience.

However, there are significant challenges in implementing RPL, including cost, quality assurance, transparency, and the lack of national standardisation, with differences apparent at the provider level. Realising the potential of RPL will require a dedicated, coordinated effort across various government, industry, and pathway-provider stakeholders.

This highlights the importance and implications for:

- **government:** supporting scaling and standardising RPL application
- **pathway providers:** collaborating with government and industry stakeholders to enable the above.

Accurately measuring and reporting data on the Australian industry is challenging

No separate category for the Australian Automotive industry exists under the ANZSIC system. Instead, it is split across the manufacturing, wholesale, retail, and other services divisions, across varying levels of aggregation. This results in inconsistent reporting and tracking. AUSMASA has recommended to the Australian Bureau of Statistics (ABS) that a separate classification be created for the Automotive industry.

This separation would enhance the clarity and improve the accuracy of industry classification for Automotive-related activities. Thus, enabling more accurate economic and econometric analysis on this industry classification.

This highlights the importance and implications for:

- **government:** updating industry classifications to enable accurate labour market analysis.

The lack of visibility on career pathways obstructs skills supply

Tags: education pathways, management or supervision upskill, gender equity

Limited visibility of career pathways constrains the effective supply of skills in the labour market. When individuals lack clear, accessible information about available roles, required competencies, and progression routes, it is harder for them to make informed decisions about education, training, and career transitions. Research has also shown that female cohorts are disproportionately affected by information asymmetry. Current career pathway resources compound this challenge. Many existing maps are outdated and fail to incorporate emerging occupations in electric and autonomous vehicles, such as battery technicians, sensor calibration specialists, robotics technicians, and automotive cybersecurity roles. However, among career starters, 44% are keen to learn about EVs, and 43% are keen to learn about advanced technologies.[62] Existing resources are also largely designed for students and entry-level workers, offering minimal guidance for mid-career adults transitioning from related industries. As a result, individuals must piece together fragmented information from OEM programs, TAFE and RTO providers, government agencies, and vocational certification frameworks to understand their options.

Our upcoming career pathways project will address these gaps by developing a comprehensive, integrated map of career pathways that reflect real industry structures. This can help reduce skills mismatches and build a more resilient, future-ready workforce system by better aligning career expectations and improving visibility.

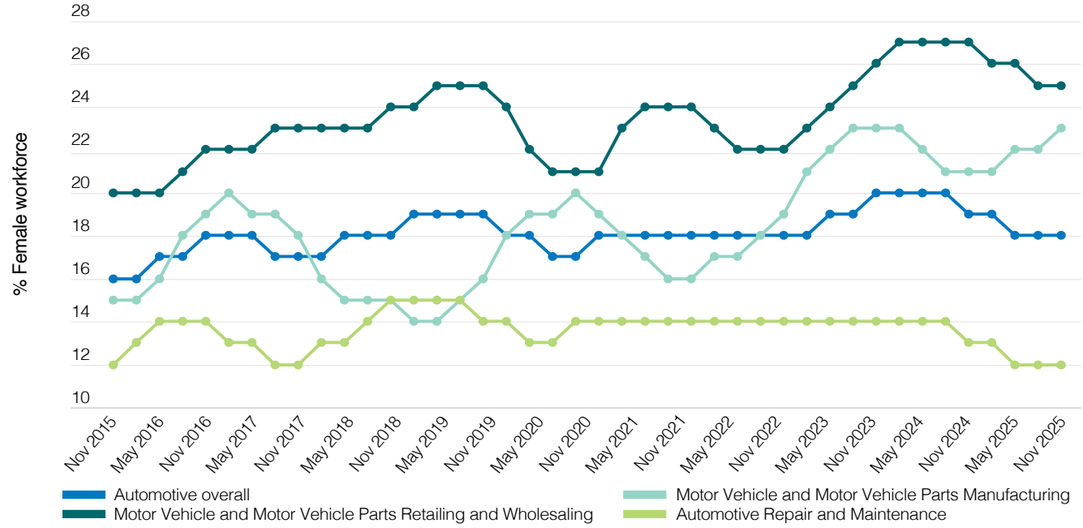
58 Deloitte, "Skills Shortages in the Australian Automotive industry", 2024. Cited in AUSMASA, "Can RPL solve skills shortages", 2025.
59 Capricorn, "State of the Nation" ,2025. Cited in AUSMASA, "Can RPL solve skills shortages", 2025.
60 NCVER, "Adult Trade Apprentices: Exploring the Significance of Recognition of Prior Learning and Skill Sets for Earlier Completion", 2015. Cited in AUSMASA, "Can RPL solve skills shortages", 2025.
61 AUSMASA, "Can RPL solve skills shortages", 2025.
62 AUSMASA, "Perceptions of Automotive Careers", 2025.

Gender representation in the Automotive industry

Overall, the Automotive industry's gender ratio has remained relatively stable, with some notable spikes in male representation during May 2018 and August 2020 (Figure A4). Since May 2022, the industry has gradually shifted back towards a lower, more sustained gender balance, as the ratio has decreased and now stands closer to 4:1. Yet, despite this progress, the Automotive industry remains predominantly male, with more pronounced disparities in some key occupations. Female workers were concentrated in the 35–44 age range, while men were more evenly distributed across the 25–34, 35–44, and 45–54 age ranges. Suggesting that men tend to remain in the industry for longer, potentially shifting into business ownership.[63] While women face gendered issues like unpaid caring and domestic responsibilities at certain ages, and in general.[64]

Motor Mechanics comprise the industry's largest occupation, with sizable gender disparity: 81,800 males compared to 2,700 females. Other occupations, like Metal Fitters, Machinists, and Motor Vehicle and Vehicle Parts Salespeople, also showed a large male majority. On the other hand, the more general occupation of Keyboard Operators has had a large share of female workers, with 1,700 women and 300 males, reinforcing gendered issues and women's long association with administrative and support roles.

Figure A4: Proportion of female workforce, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Sector-level trends

- In the **Automotive Manufacturing**, the percentage of female workers has gradually increased over the last decade, as it recovered from the end of large-scale passenger car manufacturing. With a baseline of 15.1% in 2015, the proportion of female workers steadily rose to 23.3% by 2025. This could also be noteworthy for the industry, as women's completions of AUM qualifications have never exceeded more than 7 each year[65] – which is unlikely to be sufficient to fulfil increased private and public sector investments, like $30.7 m of equity recently provided to a Melbourne EV manufacturer through the Government's National Reconstruction Fund.[66]
- The **Automotive Wholesale and Retail** has also had a consistently high share of female workers, a key factor in the industry's overall gender balance. From the industry's highest starting baseline of 19.9% in 2015, the sector's share of female workers steadily increased over the last decade to a series high of 27.4% by August 2024 and then dropping to 25.1% by end of 2025. This is also important, as it indicates that women are keen to take on roles like Motor Mechanics when available, which have accounted for the second-largest occupation in the sector and have seen almost 400 completions by female students throughout 2024.[67]
- However, the **Automotive Repair and Maintenance** has shown minimal change in female representation over the last 10 years. With a baseline of 12.1% in 2015, its share of female workers has fluctuated by 1 percentage point per year, reaching a peak of 15.1% in 2018 and 2019, but subsequently declining to around 14% for several years and then further decline to 11.6% by end of 2025. This shows that the Repair and Maintenance sector remains heavily male-dominated.[68]

63 AUSMASA, "Gender Representation", 2025.
64 Chief Executive Women, "Addressing Australia's Critical Skill Shortages: Unlocking Women's Economic Participation", 2022.
65 NCVER, "Total VET program completions 2015–2024", 2024.
66 National Reconstruction Fund Corporation, "National Reconstruction Fund's first transport investment supports energy transition with $30.7 million equity stake in Applied Electric Vehicles", 2026.
67 NCVER, "Total VET program completions 2015–2024", 2024.
68 AUSMASA, "Gender Representation Dashboard", 2026.

State of the industry - Mining

The Mining industry's employment remains stable, but its transition toward critical minerals will require coordinated support to sustain workforce growth and manage structural shifts.

The Mining industry continues to experience stable employment, with a workforce of around 300,000. The female workforce comprises a stable 18.9% of the workforce, and a part-time workforce of 5.2% (Figure M8). As the industry shifts towards critical minerals, employment is expected to grow. However, that transition will require targeted support and coordination to ensure it is seamless, particularly if there are workers moving between commodities or types of activity.

Mining training is concentrated in Queensland, but employment and businesses are largely based in Western Australia due to structural and geographic factors.

A large majority of the Mining industry workforce receives education and training in Queensland (QLD) (54.6%); however, employment and employers are more concentrated in Western Australia (WA), creating a skills supply-demand friction (Figure M9). Multiple reasons account for this disparity – various Mining employers prefer in-house non-accredited training, and businesses are also skewed towards areas with higher incidence of natural resources, which WA and QLD tend to have more of, given the size of the states.

QLD also has a concentration of Coal Mining activity, which has led to the establishment of strong industry-RTO partnerships. Given that coal mining is more heavily regulated (particularly via state-specific regulations), employers are more likely to rely on accredited training pathways. This reliance allows RTOs to purchase equipment and roll out larger-scale delivery models, which benefit from economies of scale and are easier to adapt to other non-coal training and pathway services. This can explain why QLD tends to have a larger concentration of enrolments across the Mining industry.

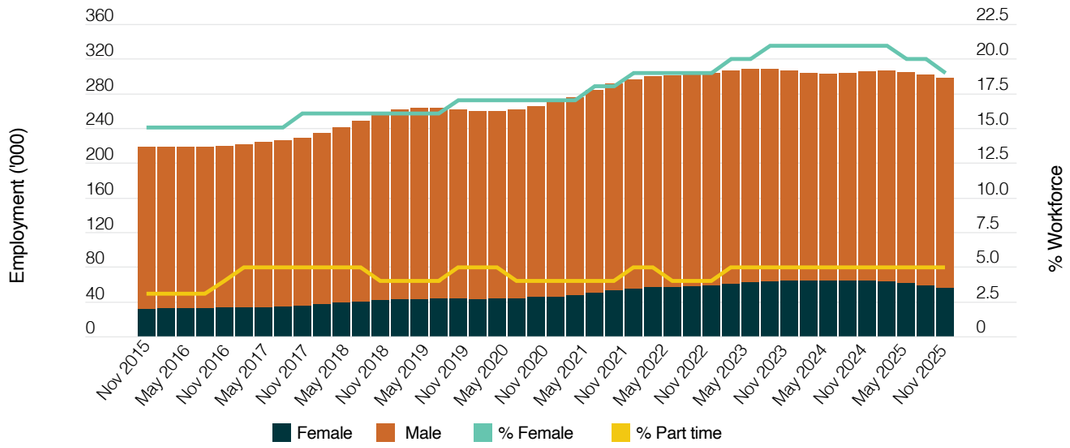
Over half of the Mining industry's domestic output directly supports the Manufacturing industry, with the remainder used to produce energy.

Approximately 58.1% of mining output is used to manufacture mining-related commodities, including basic non-ferrous metals, petroleum and coal products, iron, and other materials. Around 24.5% of the output is consumed within the Mining industry itself, while about 6.6% is allocated to electricity generation. (Figure M10).

9 out of 11 key occupations in the Mining industry are facing shortages

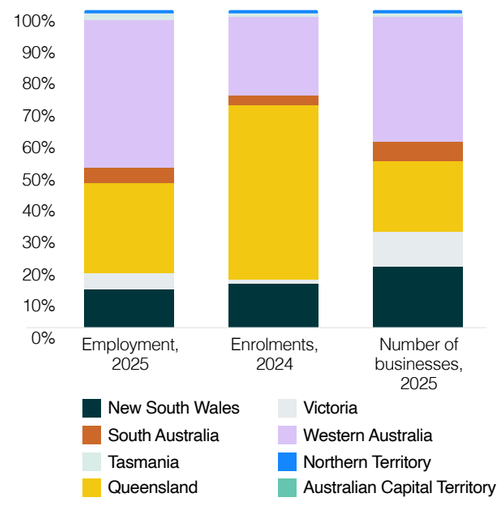
Key occupations in the Mining industry face shortages, as the industry competes with construction and transport (Table M1). These key occupations saw vacancy growth over the past decade. Although the industry has been an early adopter of electrified vehicles and solutions, it still has a considerable fleet of internal combustion engine vehicles. The maintenance and upkeep of this fleet requires a sizeable cohort of Diesel Motor Mechanics, but the skills pipeline has been constrained by industry-wide perceptions and recruitment challenges.

Figure M8: Mining employment, 2015–2025



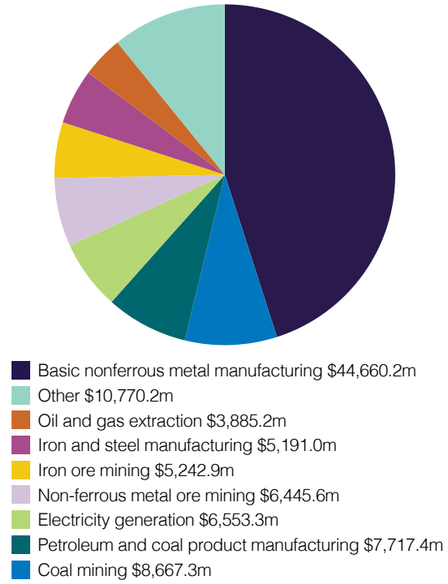
Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Figure M9: Mining employment size, number of enrolments and businesses by state and territory, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024

Figure M10: What does the mining sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table M1: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Drillers, Miners and Shot Firers	54,100	178%	No	RS
Metal Fitters and Machinists	29,900	148%	Yes	S
Other Building and Engineering Technicians	20,100	20%	Yes	NS
Electricians	15,200	140%	Yes	S
Truck Drivers	14,500	63%	No	S
Mining Engineers	10,700	185%	Yes	S
Production Managers	8,100	59%	Yes	NS
Geologists, Geophysicists and Hydrogeologists	7,900	247%	Yes	S
Earthmoving Plant Operators	6,300	67%	No	S
Structural Steel and Welding Trades Workers	5,600	72%	Yes	S
Diesel Motor Mechanic	341	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

Key strategic challenges in the industry

System pressures

The Mining industry is undergoing structural transformation while facing persistent and record-level **skills shortages** across engineering, technical and regional roles. Demand is rising for **higher-education-aligned occupations** as the sector shifts toward **critical minerals**, **automation**, **electrification**, and **low-emissions** operations.

Workforce pressures

Declining university enrolments, migration constraints, and misalignment between training systems and industry needs are **restricting supply**. **Regional** workforce pressures, infrastructure and **housing shortages** further limit attraction and **retention**. Community perceptions, **mental health** concerns linked to FIFO work, and **succession planning** across the **mine life cycle** add complexity, placing workforce capability at the centre of productivity, resilience and the energy transition.

State of the industry - Coal Mining

Coal Mining's workforce has shown a decline in female participation in recent months.

Employment levels have remained relatively stable over the past decade, compared with other industries, and were less affected during the pandemic. Female representation increased from 8.2% in 2015 to 18.3% in 2024. However, it has declined in 2025, falling back to 7.8% in the November 2025 quarter (Figure M11). As this trend overlaps, or at least shares similarities, with trends in the (total) proportion of part-time workers, it could indicate that women were more likely to hold part-time roles that were not ongoing and/or conflicted with other responsibilities outside of work.

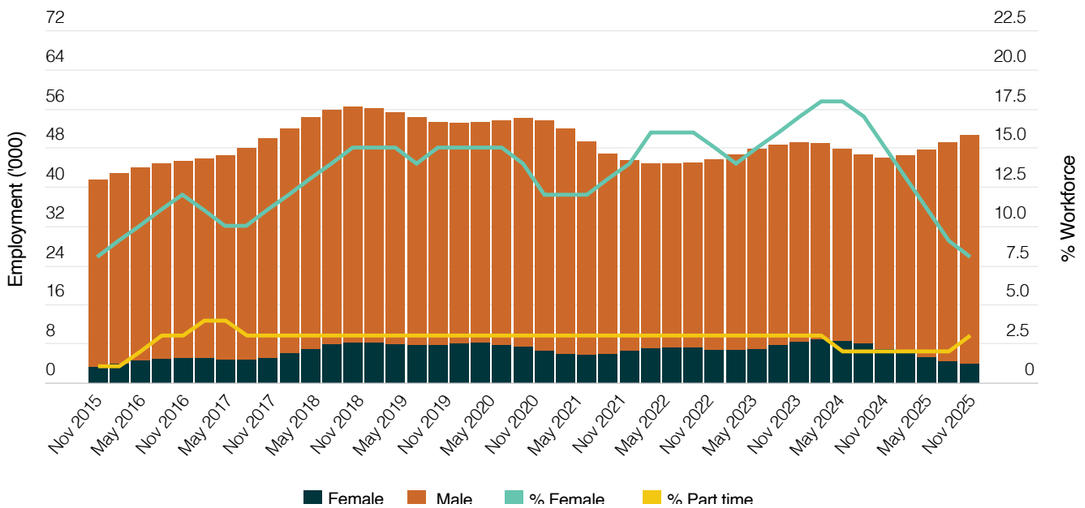
Queensland leads in employment in the Coal Mining industry.

New South Wales (NSW) accounts for around one-third (36%) of total Coal Mining employment (Figure M12). QLD tends to have the largest majority of employment (55.7%) and enrolments (70.9%) relevant to the sector. While the sector had a presence in almost all states and territories at different times, today it is concentrated in the Bowen-Surat basin in QLD and the Hunter region in NSW.

The Coal Mining sector makes a significant contribution to the energy and manufacturing sectors.

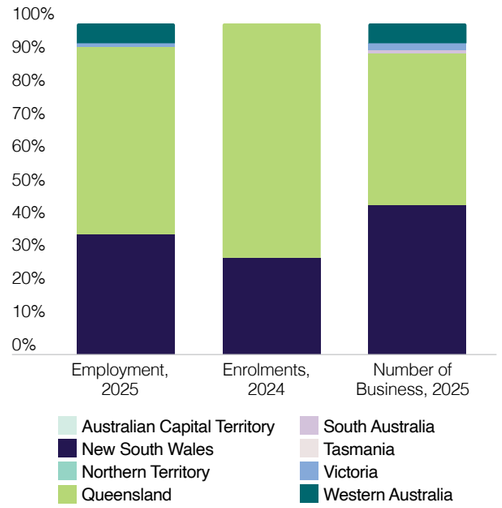
Approximately 65.1% of coal production is supplied to electricity generation (Figure M13). This highlights the need for succession planning to manage the Net Zero transition, particularly to replace the volume of electricity generated by coal-fired power plants. There is also a need to manage the transition downstream. If the shift to Net Zero leads to the shutdown of coal mines and power stations, the economic effects can be devastating for local communities unless managed properly through coordinated succession planning. Particularly because many of these communities are regionally linked, and there might not be employers large enough in the region to absorb the newly out-of-work workforce. A successful transition will require coordination across various levels of government and stakeholders.

Figure M11: Coal Mining employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Figure M12: Coal mining employment size, number of enrolments and businesses by state and territory, 2024–2025

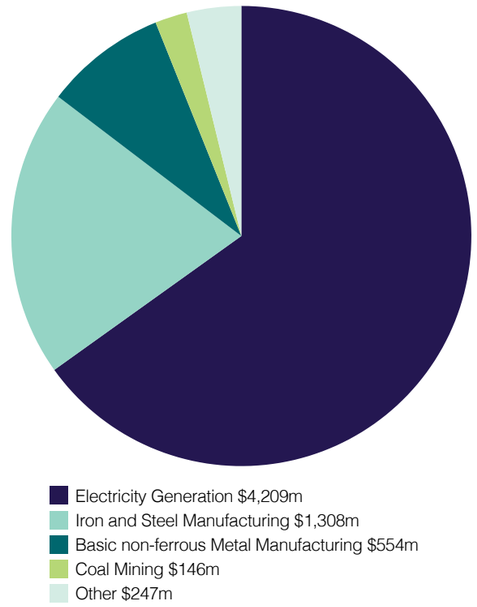


Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024. Note: The enrolment figure is based on the overall RII training packages, not exclusive to the sub-industries.

8 out of the 11 key occupations in the Coal Mining sector have experienced shortages in 2025.

Over the past decade, demand for these key occupations has increased, as reflected in positive vacancy growth across all 11 roles (Table M2). The sector continues to face challenges in recruitment, retention, and attraction, particularly due to negative perceptions linked to climate change. The challenge is exacerbated by a lack of understanding of VET pathways among career counsellors and school leavers, exacerbating the skills shortage. With growing electrification in the sector, there is rising demand for electrical, diagnostic, and digital skills.

Figure M13: What does the sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table M2: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Drillers, Miners and Shot Firers	16,600	178%	No	RS
Metal Fitters and Machinists	5,200	148%	Yes	S
Other Building and Engineering Technicians	5,000	20%	Yes	NS
Electricians	4,400	140%	Yes	S
Truck Drivers	2,900	63%	No	S
Earthmoving Plant Operators	1,200	67%	No	S
Mining Engineers	1,000	185%	Yes	S
Production Managers	1,000	59%	Yes	NS
Surveyors and Spatial Scientists	800	73%	Yes	S
Other Stationary Plant Operators	700	165%	No	NS
Diesel Motor Mechanic	28	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage. 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. 3. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

State of the industry - Oil and Gas Extraction

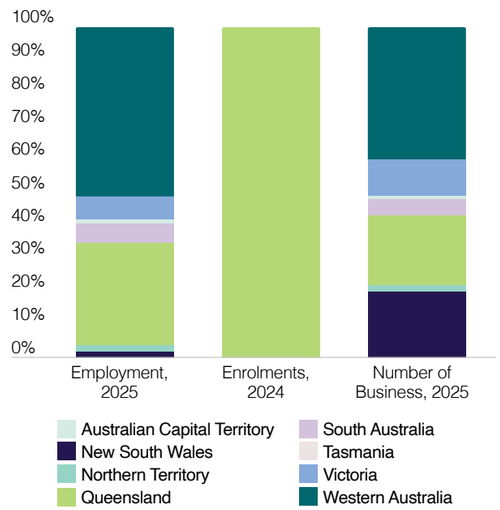
In 2025, Australia's Oil and Gas Extraction sector employed about 25,000 people, with declining female participation and a sharp reduction in part-time work.

The oil and gas extraction industry employed around 25,000 people in 2025. Female participation was approximately 16.5% in 2025, declining from a peak of 25.1% in 2022 (Figure M14). The proportion of the part-time workforce fell to about 1%.

The Oil and Gas Extraction sector employed is concentrated in Western Australia, while the training provision is concentrated in Queensland

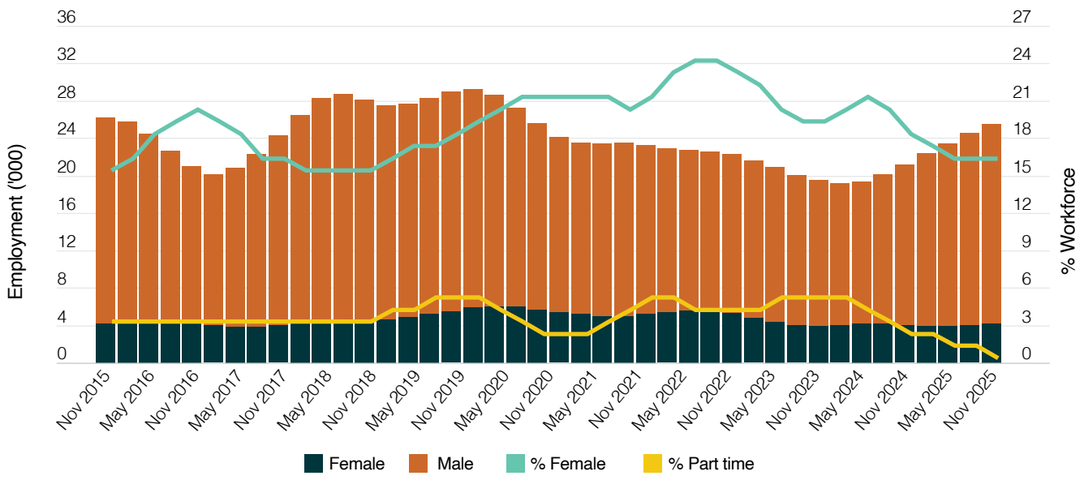
Employment in the sector is highly concentrated in WA (50.5%) and followed by QLD (30.2%) (Figure M15). In contrast, businesses are more evenly distributed across the states, though still with a concentration in WA. The industry tends to rely on on-shore qualifications to also service off-shore activities, along with industry-provided non-accredited training. Notably, the key qualifications, including certificates in Drilling Oil and Gas and Well Servicing Operations, are delivered exclusively in Queensland as of 2024.

Figure M15: Employment size, number of enrolments and businesses by state and territory, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

Figure M14: Oil and Gas Extraction employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

The Oil and Gas Extraction sector is a key enabler of electricity generation and petroleum manufacturing

The Oil and Gas Extraction sector primarily supports the manufacturing of petroleum and coal products (Figure M16). Output is mainly utilised in power generation, petroleum and coal manufacturing, and other metal manufacturing. Often needed as both a processing input and a power-generation input. The shift away from fossil fuels will need to address supply chain gaps to maintain current levels of economic activity. Skills-related succession planning will also be needed to ensure employment outcomes are not compromised. While some roles can be directly absorbed into other industries (e.g., drillers in construction), the mapping is not as clear for other occupations. A comprehensive skills mapping exercise would be required to coordinate economy-wide responses and planning.

5 of 11 key occupations in the industry are not in shortage, according to the OSL

5 out of 11 key occupations are reported as being in shortage at either the national or regional level (Table M3). The industry has struggled with skills shortages in crucial occupations and roles.[69] The sector also faces challenges around decommissioning. As decommissioning matures in Australia, it is expected that the existing workforce may be unable to meet skills demand.[70]

Figure M16: What does the sector support in 2023?

Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table M3: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Mining Engineers	2,500	185%	Yes	S
Metal Fitters and Machinists	2,100	148%	Yes	S
Industrial, Mechanical and Production Engineers	1,700	69%	Yes	NS
Drillers, Miners and Shot Firers	1,200	178%	No	RS
Chemical, Gas, Petroleum and Power Generation Plant Operators	1,100	33%	Yes	NS
Electricians	900	140%	Yes	S
Production Managers	800	59%	Yes	NS
Engineering Managers	800	161%	Yes	NS
ICT Business and Systems Analysts	800	-30%	Yes	NS
Other Building and Engineering Technicians	700	20%	Yes	NS
Diesel Motor Mechanic	8	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

69 Mining Magazine, "Predicting the jobs of tomorrow", 2024.
70 CODA, "Skills Review of the Australian Oil and Gas Decommissioning Industry", 2024.

State of the industry - Metal Ore Mining

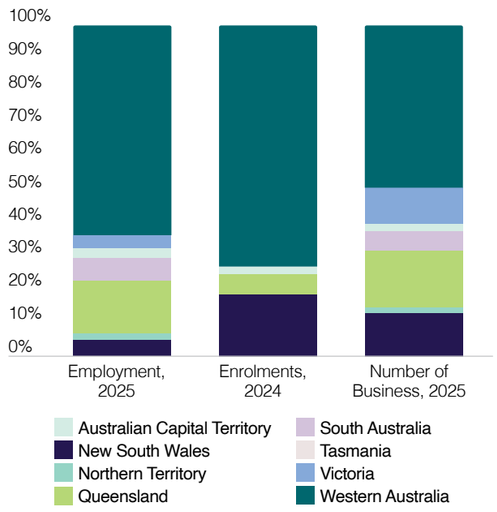
The Metal Ore Mining sector has experienced strong and sustained employment growth over the past decade, making it the largest employer among all mining subsectors.

Employment in the Metal Ore Mining sector has increased significantly over the last ten years (Figure M17). It accounts for the highest employment level across all mining subsectors. The most rapid growth occurred between 2015 and 2019, when employment almost doubled from approximately 63,000 to 120,000.

Employment and education in the industry is concentrated in Western Australia, while business establishments are more geographically dispersed, with a concentration in Western Australia (Figure M18).

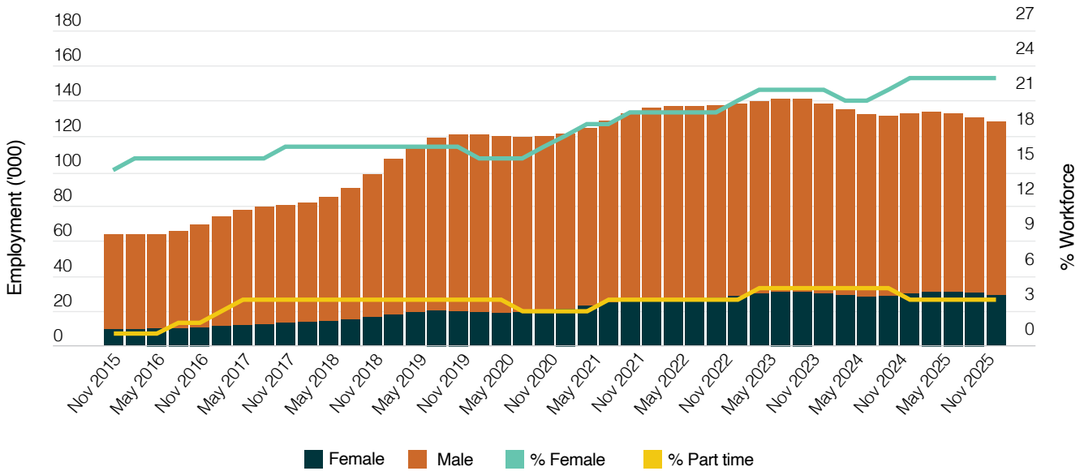
Although most of the employment is based in WA and QLD, businesses are distributed more broadly across Australia. There are also notable disparities between enrolment and employment locations. NSW accounts for 18.2% of the metal ore-related qualifications, while represents 4.5% of the total employment in the sector.

Figure M18: Employment size, number of enrolments and businesses by state and territory, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

Figure M17: Metal Ore Mining extraction employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

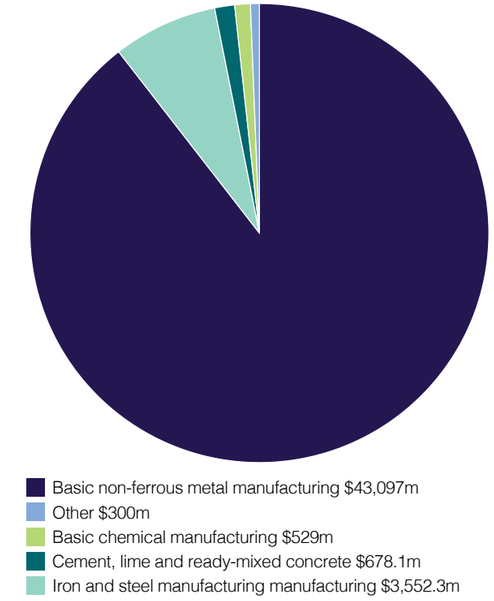
The sector is a key input into the Manufacturing industry

Most of the sector's domestic output directly supports Basic Non-ferrous Metal Manufacturing, highlighting a strong downstream linkage to this segment of the manufacturing industry. Specifically, around 89.5% of domestic output is supplied to Non-ferrous Metal Manufacturing, while 7.4% flows to Iron and Steel Manufacturing (Figure M19). This suggests that the Metal Ore Mining sector's domestic value chain is heavily concentrated in non-ferrous metal processing, unlike other subsectors, which are diversified across multiple industries.

8 out of 11 key occupations are experiencing shortages.

Key occupations in Metal Ore Mining closely mirror those of the broader Mining industry (Table M4). With Metal Ore Mining accounting for approximately 43.0% of total Mining employment in 2025, the sector plays a major role in defining the workforce composition and key occupational trends across the entire Mining industry. As the industry continues its journey towards electrification demand for diagnostic, digital, and electrical skills is rising.

Figure M19: What does the sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table M4: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Drillers, Miners and Shot Firers	24,100	178%	No	RS
Metal Fitters and Machinists	14,400	148%	Yes	S
Other Building and Engineering Technicians	9,700	20%	Yes	NS
Electricians	6,600	140%	Yes	S
Truck Drivers	6,600	63%	No	S
Mining Engineers	4,500	185%	Yes	S
Production Managers	3,500	59%	Yes	NS
Geologists, Geophysicists and Hydrogeologists	2,900	247%	Yes	S
Other Construction and Mining Labourers	2,800	120%	No	NS
Structural Steel and Welding Trades Workers	2,600	72%	Yes	S
Diesel Motor Mechanic	92	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

State of the Industry - Quarrying

Employment in the Quarrying industry exhibits clear seasonal fluctuation largely influenced by construction activity.[71]

The sector supplies materials for residential buildings, commercial construction, and infrastructure projects. Consequently, employment levels tend to rise and fall in tandem with the construction cycle, reflecting periods of higher and lower demand for building materials (Figure M20).

Employment is concentrated in Western Australia and Queensland

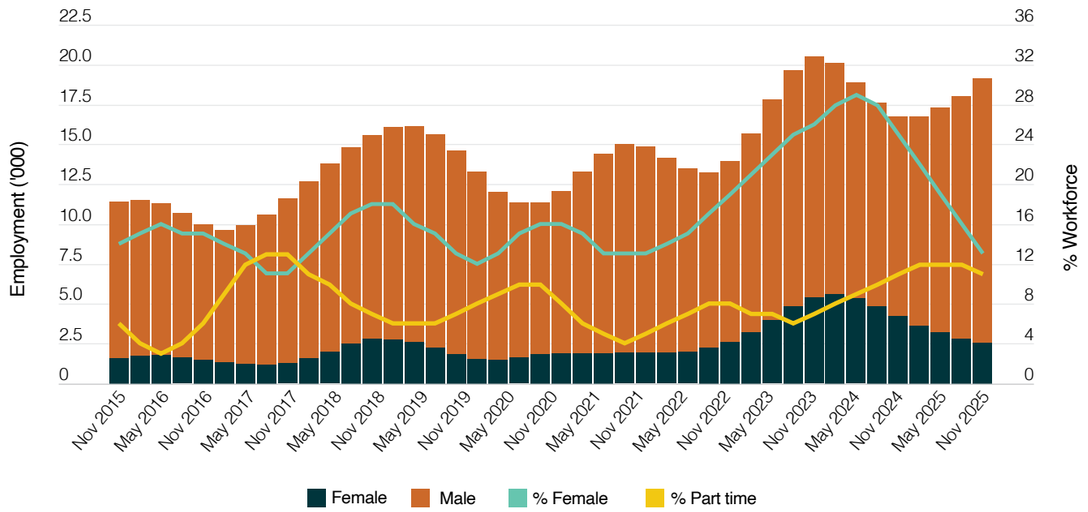
Employment in this sector is concentrated in WA and QLD, while businesses are more evenly distributed across the country (Figure M21). WA and QLD account for most of the employment, though Victoria (VIC) shows a relatively stronger presence compared to other subsectors. In contrast, businesses are more evenly distributed, with 28.9% located in NSW, despite the state accounting for 9.7% of total employment, suggesting a higher concentration of smaller enterprises there.

There is a clear disparity between enrolment and employment locations. QLD hosts the largest share of enrolments (59.1%), yet it accounts for 30.4% of employment. This may reflect state-specific requirements, particularly in mineral mining and RII units, which may lead workers in QLD to undertake additional training.[72]

The sector is a key enabler of the construction industry

The Non-Metallic Mineral Mining and Quarrying sector primarily supplies the construction industry, providing both materials and services (Figure M22). Specifically, about 48.1% of the sector's output supports construction services, while 14% goes to the manufacturing of cement, lime, and concrete. This highlights the sector's critical role in underpinning Australia's building and infrastructure activities.

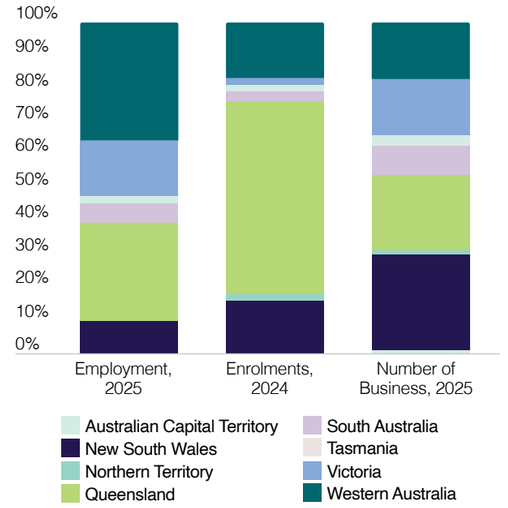
Figure M20: Non-metallic mineral mining and quarrying employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

[71] Quarrying corresponds to the ANZSIC sub-division non-metallic mineral mining and quarrying.
[72] Commissioner for Resources Safety & Health, "Mineral mining and quarrying competencies", 2023.

Figure M21: Employment size, number of enrolments and businesses by state and territory, 2024-2025

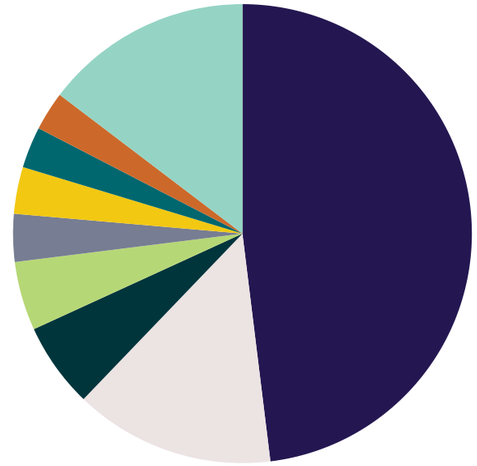


Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

7 out of 11 key occupations are experiencing shortages.

The industry's key occupations largely mirror those of the overall mining sector, with Drillers, Miners and Shot Firers, and truck drivers playing a particularly prominent role (Table M5), and more than half of these key occupations are currently experiencing skills shortages. The industry reports an acute skills shortage, particularly for heavy automotive drivers and the skills ecosystem around road transport. In the lead-up to the Brisbane 2032 Olympics, these skills shortages are expected to exacerbate. The workforce, on the other hand, is less mobile and tends to remain in its respective state. There have also been reports of psychosocial risk for drivers from diverse backgrounds in the truck driver occupation, particularly in construction sites, leading to retention challenges. The industry relies on both employees and contractors to meet its skills demand in the logistics space.

Figure M22: What does the sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table M5: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Drillers, Miners and Shot Firers	1,800	178%	No	RS
Metal Fitters and Machinists	1,300	148%	Yes	S
Other Building and Engineering Technicians	1,100	20%	Yes	NS
Earthmoving Plant Operators	1,100	67%	No	S
Truck Drivers	1,000	63%	No	S
Production Managers	900	59%	Yes	NS
Geologists, Geophysicists and Hydrogeologists	700	247%	Yes	S
Electricians	600	140%	Yes	S
Other Stationary Plant Operators	600	165%	No	NS
Accountants	500	-25%	Yes	NS
Diesel Motor Mechanic	10	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

State of the Industry - Exploration and Other Mining Support Services

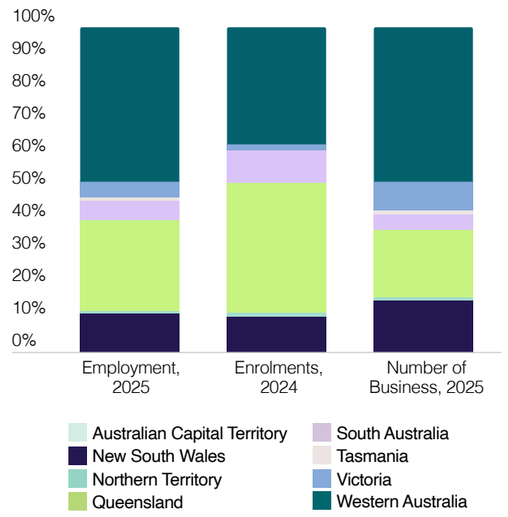
The exploration sector faces declining employment

The exploration and other mining industries experienced a decline in employment around 2019–2020 (Figure M23). Even before the COVID-19 pandemic, Australia's mineral exploration sector faced historically low investor confidence, which constrained activity and hiring.[73] The combined effects of weak investment and the pandemic reduced employment to around 41,000 in 2020. Since then, the industry has rebounded, reaching approximately 69,000 employees by 2025 (Figure M24).

Activity is largely concentrated in Western Australia and Queensland

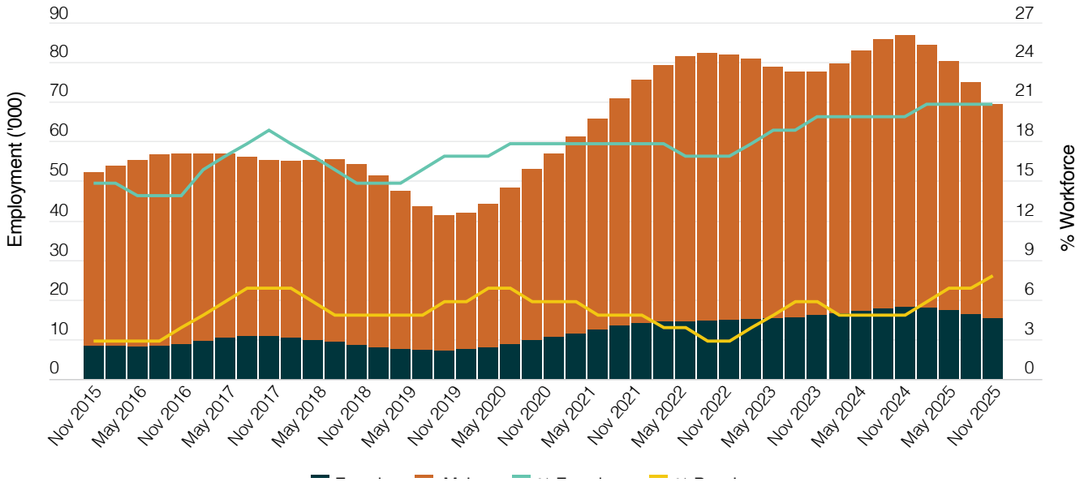
Like other mining subsectors, both employment and business activity are concentrated in WA and QLD, with NSW housing a relatively stable proportion of the workforce and businesses.

Figure M24: Employment size, number of enrolments and businesses by state and territory, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

Figure M23: Exploration and Other Mining Support Services employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

[73] AMEC, "AMEC Submission", 2021.

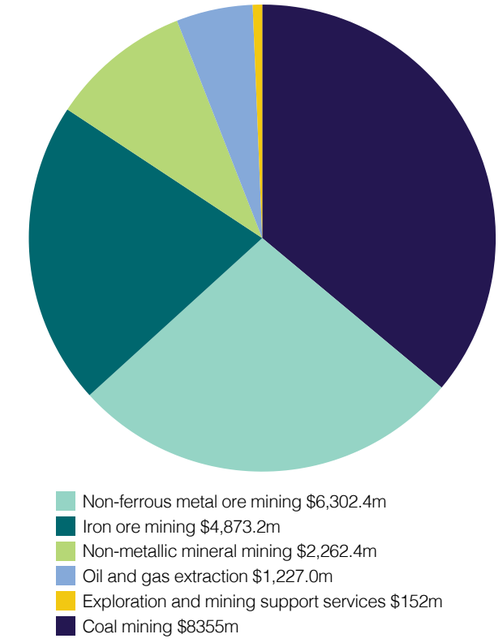
The sector is a key enabler of mining activity

The sector primarily supplies other Mining industries, providing 48.2% of its output to Metal Ore Mining (including Iron Ore), 36.1% to Coal Mining, and 9.8% to Non-Metallic Mineral Mining (Figure M25).

8 out of 11 key occupations face critical shortages

8 out of 11 key occupations in the sector are currently experiencing skills shortages, with Drillers, Miners and Shot Firers and Metal Fitters and Machinists being at the top (Table M6).

Figure M25: What does the sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table M6: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Drillers, Miners and Shot Firers	9,500	178%	No	RS
Metal Fitters and Machinists	6,300	148%	Yes	S
Truck Drivers	3,800	63%	No	S
Other Building and Engineering Technicians	3,400	20%	Yes	NS
Geologists, Geophysicists and Hydrogeologists	3,000	247%	Yes	S
Electricians	2,700	140%	Yes	S
Mining Engineers	2,200	185%	Yes	S
Production Managers	1,800	59%	Yes	NS
Structural Steel and Welding Trades Workers	1,600	72%	Yes	S
Other Construction and Mining Labourers	1,400	120%	No	NS
Diesel Motor Mechanic	21	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

State of the Industry - Drilling

The Drilling industry is critical for exploration and the provision of infrastructure needed to access energy and mineral resources, including critical minerals essential to advancing Net Zero outcomes.

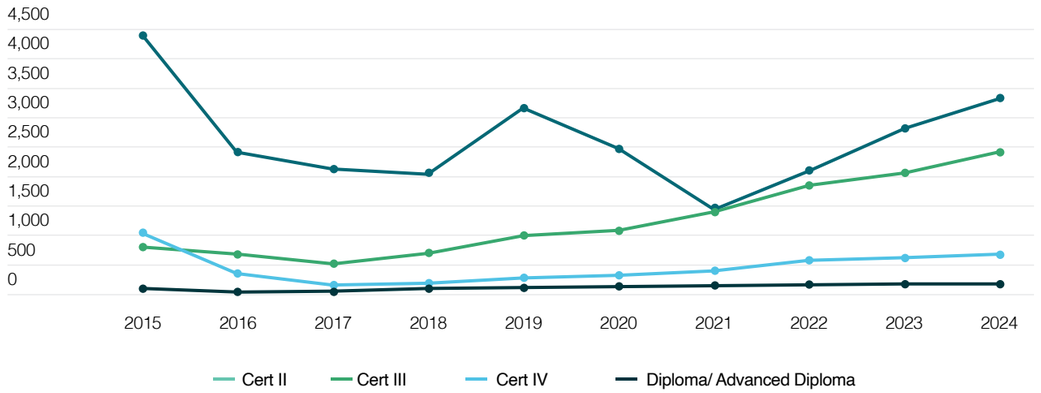
The industry employs a workforce of 12,1000 people employed by drilling contractors across drilling and support roles. The workforce was split across the mining (53%), construction (13%) and support services (30%) industries in 2025. With 8,400 individuals employed as drillers and drillers' assistants in 2025.[74]

Drilling enrolments, and completions are showing rising trends

Certificate II in Oil & Gas Drilling (Onshore) and Well Servicing has consistently been the most enrolled drilling qualification since 2015 (Figure M26). It also has the most female completions among the three total qualifications over the decade. However, drillers and drillers' assistants remain in short supply nationwide.

With drilling an essential component of mineral mining, the demand for resources for advancing Net Zero targets and the move towards electrification will require more of the workforce. Skills development through traineeships and a push to increase female participation can alleviate these pressures. Industry has identified that recognition of prior learning (RPL) could help ensure more qualified drillers obtain qualifications.

Figure M26: RII Drilling qualification enrolments 2015–2024



Source: VOCSTAT, "TVA program enrolments 2015-2024", 2024.

[74] ADIA, "Economic Impact of Drilling in Australia", 2025.

Figure M27: Female completions 2015–2024

Source: VOCSTAT, "TVA program completions 2015-2024", 2024; Note: Superseded and current qualifications added together. Only qualifications with female completion shown.

Table M7: Key occupations, 2021

Occupation	Employed	Shortage	In CSOL?
Drillers, Miners and Shot Firers nfd	230	RS	No
Driller	8,070	S	No
Driller's Assistant	2,260	S	No

Source: ABS, 2021 Census Data, 2022; JSA, "Occupation Shortage List", 2025; Department of Home Affairs, "The Core Skills Occupation List", 2024. Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage. 2. The key occupations have been selected based on AUSMASA's remit. Since it is difficult to measure the drilling workforce within ANZSIC classification, the occupation figures presented reflect the total number of workers in relevant occupations (ANZSCO 6-digit level) across all Australian industries. 3. The employment figure is rounded to the nearest 10.

Industry has raised concerns about the attrition of Drillers from commodity-price-driven exploration into other, more perennial sectors such as geotechnical and water well drilling. Industry has identified that recognition of prior learning (RPL) could offer a potential solution, helping to ensure more qualified Drillers can obtain their qualification in the Certificate III in Drilling Operations or a similar qualification. As this would create a training culture from the top down, it would enable the more experienced Drillers to be more actively involved in training future Drillers.

AUSMASA has also heard industry concerns about water well licensing. Each state and territory has its own water legislation and regulations that provides the basis for water well license requirements. The National Uniform Drillers Licensing Committee (NUDLC), a body representing state and territory regulators and representatives from the Drilling industry, works to harmonise a national approach to water licensing. At present, New South Wales (NSW) operates a 6-class system, whereas all other states and territories use a 3-class system. To obtain a water well licence, no qualifications are required with applicants required to sit an open-book examination. In most states and territories license applicants also must pass a verbal license interview with a panel of industry experts and/or regulators adjudicating.

This current system may not fully address knowledge and skills gaps that are left to employers to address. Because new license holders may lack underpinning knowledge, industry stakeholders have suggested that accredited training – such as a water well skillset or a Certificate III in Drilling Operations should be the prerequisite for obtaining a license.

State of the Industry - METS

The METS sector is a key employer across Manufacturing and Automotive Repair and Maintenance

Mining Equipment, Technology, and Services (METS) is split across multiple ANZSIC divisions and 20 subdivisions, and there is no single identifier for it in the ANZSIC system, making it harder to track and measure.

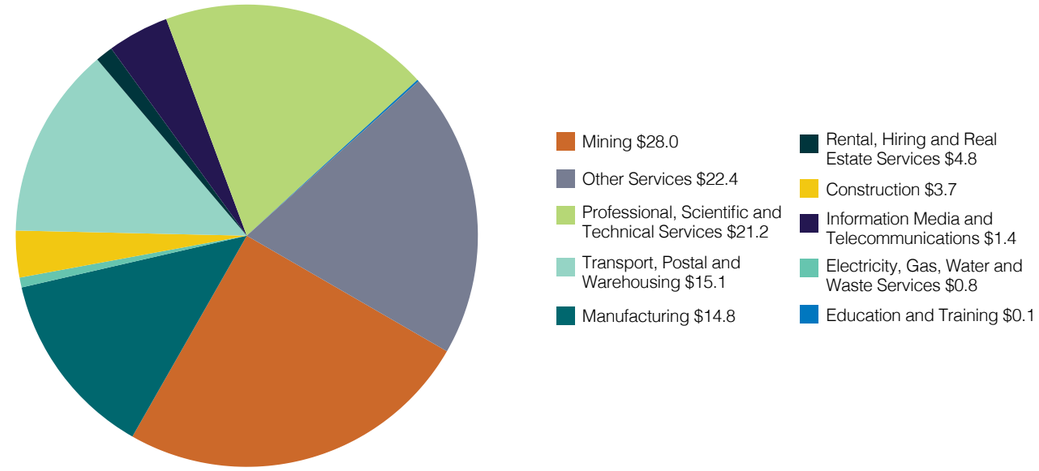
The overall sector has strengthened, driven by strong post-COVID-19 growth. The METS sector is split across various other sectors and industries, as every $100 spent in METS goes to manufacturing ($14.8) and other services (mainly automotive repair and maintenance; $22.4), among others (Figure M28). The majority of the sector's output is exported and faces growing competition from imports, increasing by 5%.[75]

The sector inherits volatility from the Mining industry

In the financial year ending 2012-13 (FY13), there were 256,600 Full Time Equivalent (FTE) roles in the METS sector, comprised of 239,000 full-time and 35,200 part-time roles. Roles fell (-17%) to 213,900 by FY21, and by FY23, roles had largely recovered, coinciding with record mining revenues ($563 billion). Part-time roles also increased to 44,010 (+25%) in FY23.[76]

The METS sector can face volatility, in part as an extension of the Mining industry, given the shift towards electrification, the sector is undergoing a skills transformation. Mirroring the broader Mining industry, there is growing demand for electrical, diagnostic, and digital skills, as well as a greater focus on Mine planning and other higher-degree-aligned roles, such as Mining engineers and geologists. Supply pipelines for such roles have also been constricting, with universities choosing to collapse or descope their Mining engineering programs recently.[77],[78]

Figure M28: For every $100 spent in METS, each industry gets the following, 2023



Source: ABS, "National Accounts: Input-Output Tables 2022-23," 2023.

75 AUSMASA, "Mining Equipment, Technology, and Services Sector", 2025.
76 AUSMASA, "Mining Equipment, Technology, and Services Sector", 2025.
77 ABC News, "Federation University scraps one of Australia's oldest geology courses", 2025.
78 Mining.com.au, "Mining talent crossroads: Geoscience "off student radars", 2025.

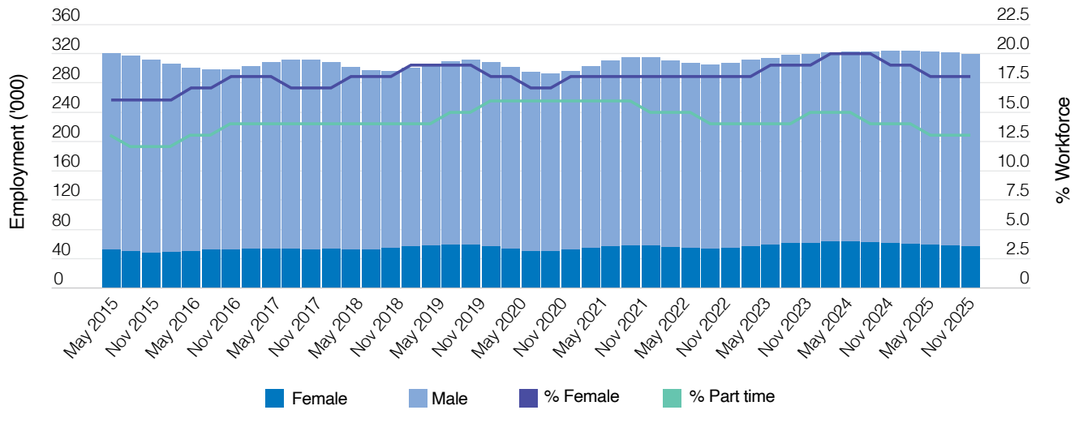
State of the Industry - Automotive

The Automotive industry has stable employment with a workforce of around 320,000.

The Automotive industry experiences largely stable employment (Figure A5). The female workforce declined to 18.1% of the workforce, alongside a part-time workforce of 12.8% in November 2025.

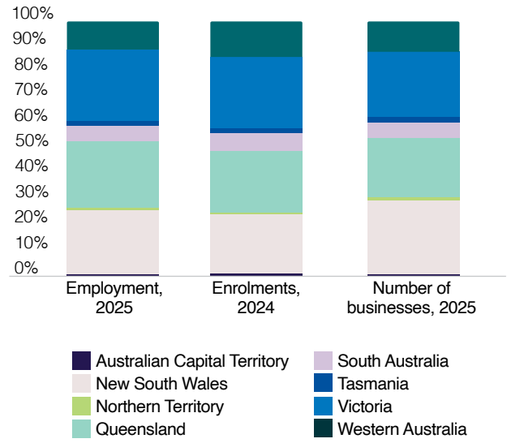
VIC accounts for the largest share of enrolments; however, employers are concentrated in NSW, with a large proportion of businesses being owner-operated (Figure A6). This disparity can be explained by statutory and regulatory nuances across states. However, there is considerable non-accredited training in the industry, and no data source to track such training, which can also account for the pathway disparity.

Figure A5: Automotive employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Figure A6: Automotive employment size, number of enrolments and businesses by state and territory, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024

7 out of the 11 key occupations in the Automotive industry are experiencing shortages in 2025 (Table A3).

Many of the Automotive industry's key occupations have seen sustained growth in vacancies over the past decade and remain in shortage, as the industry faces increasing competition to attract and retain skilled technicians. Despite these workforce pressures, the industry remains resilient, maintaining strong vehicle sales and continued strong vehicle demand. Australia recorded 1.2 m new vehicle sales in 2025, and December volumes rose 3% from the previous year. SUVs accounted for 61% of total sales, while hybrid (+15%) and plug-in hybrid (+131%) vehicles posted significant growth and battery electric vehicles accounted for an 8% share.[79]

Table A3: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Motor Mechanics	86,300	108%	Yes	S
Motor Vehicle and Vehicle Parts Salespersons	32,900	49%	No	NS
Motor Vehicle Parts and Accessories Fitters	12,500	11%	No	NS
Panelbeaters	11,900	33%	Yes	S
Retail Managers	11,500	19%	Yes	NS
Car Detailers	11,200	-6%	No	No data
Metal Fitters and Machinists	6,900	148%	Yes	S
Vehicle Painters	6,900	377%	Yes	S
Structural Steel and Welding Trades Workers	6,100	72%	Yes	S
Automotive Electricians	5,800	185%	Yes	S
Diesel Motor Mechanic	2831	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

Key strategic challenges in the industry

The Automotive industry is undergoing rapid **technological** transformation as **electrification**, **digitalisation**, and advanced vehicle systems reshape business models, service requirements, and workforce capabilities. Demand is accelerating for higher-level **electrical, diagnostic** and **software**-aligned skills to support EVs, connected vehicles and emerging **autonomous technologies**. However, persistent **skills shortages,** lower **apprenticeship** completion rates (since 2012), constrained **trainer** capacity, and inconsistent **licensing** settings are limiting supply and slowing productivity. Training providers face high costs associated with OEM tooling and compliance under Right to Repair arrangements, while RPL remains underutilised despite clear workforce gaps. The absence of a dedicated Automotive **ANZSIC** classification further obscures workforce data and planning.

[79] FCAI, "Australia's new vehicle market remains resilient", 2026.

State of the Industry - Automotive Manufacturing

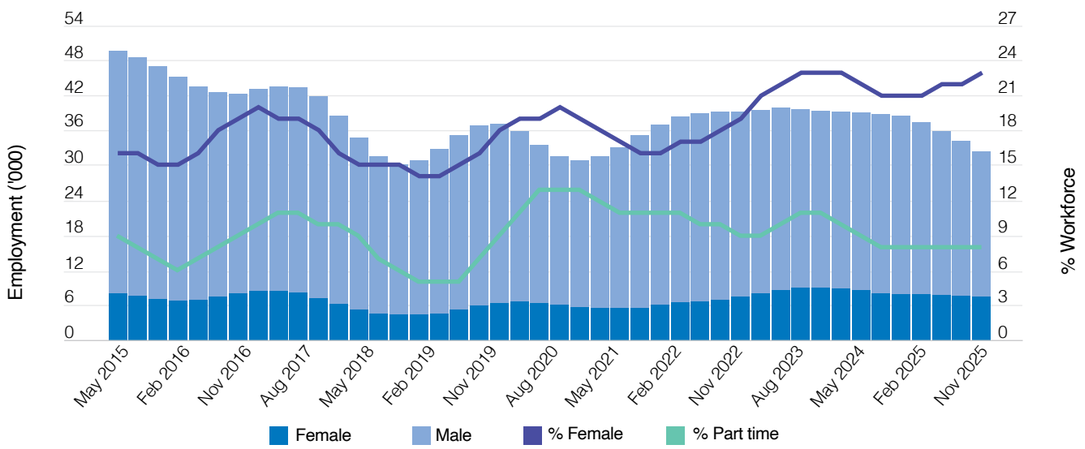
Automotive Manufacturing has shown improvement in female participation since 2022.

Female participation reached its highest level of 23.3% in November 2025. Part-time employment remained stable at 8.0% since 2024 after a decline to 4.8% at the end of 2018 (Figure A7).

Victoria has long been the centre of Australia's Automotive Manufacturing industry, supported by a highly skilled and experienced workforce.[80]

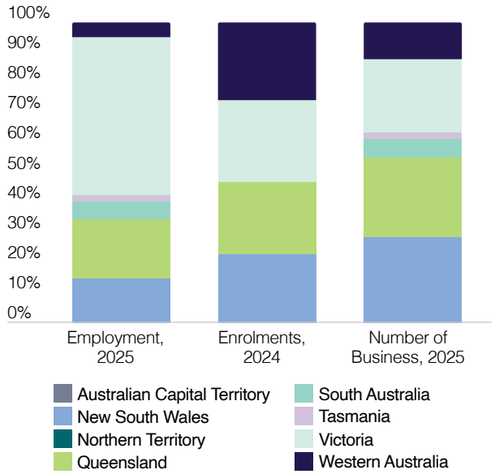
VIC accounts for the largest AUM package provider (27.4%) and 53.8% of employment in the Automotive Manufacturing industry. Meanwhile, New South Wales has the highest concentration of businesses, representing 28% of the total (Figure A8).

Figure A7: Automotive manufacturing employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Figure A8: Number of employments, delivery providers and businesses by state, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

[80] IBISWorld, "Motor Vehicle Manufacturing in Australia", 2025.

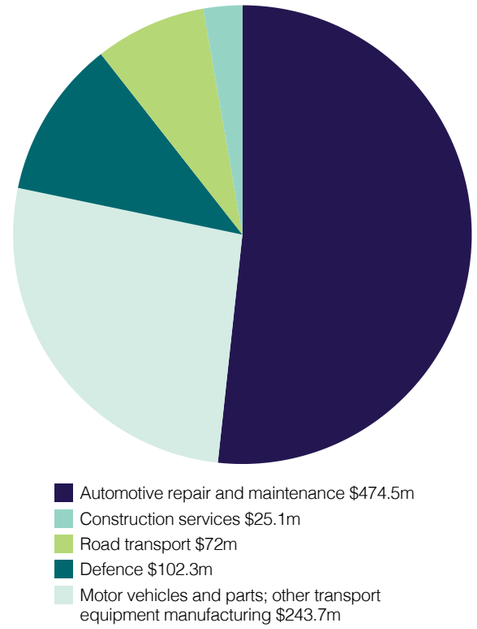
The industry is a key enabler of automotive repair and maintenance.

Automotive Manufacturing contributes $474.5m to the Automotive repair and maintenance, followed by motor vehicles and parts and other transport equipment manufacturing itself ($243.7m) (Figure A9). The industry is an integral part of the collision repair ecosystem in enabling domestic supply chains, particularly important as an input to the Mining and Construction industries.

3 out of 11 key occupations in the Automotive Manufacturing industry are experiencing shortages in 2025.

Employment in Motor Vehicle and Motor Vehicle Parts Manufacturing is largely focused on hands-on production roles, with Structural Steel and Welding Trades Workers (4,500) being the most common occupation, followed by Product Assemblers (2,800) and Production Managers (2,600) (Table A4). Given projected demand in EV adoption, there is also a growing need for end-of-life processes, particularly around lithium-ion batteries, to enable repurposing, with demand in the battery space projected to grow from 19,450 to 34,650 in 2050.[81] However, no formal pathways exist in the automotive manufacturing space for these functions. There is also the need to review the AUM training package given recent industry shifts towards EV assembly and drivetrain manufacturing, high-voltage systems, battery end-of-life management, and battery repurposing.

Figure A9: What does the sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table A4: Key occupations, 2025

Occupations	Employed	10-Yr Vacancies change	Included in CSOL?	Shortage
Structural Steel and Welding Trades Workers	4,500	72%	Yes	S
Product Assemblers	2,800	8%	No	No data
Production Managers	2,600	59%	Yes	NS
Industrial, Mechanical and Production Engineers	2,200	69%	Yes	NS
Vehicle Body Builders and Trimmers	1,400	28%	Yes	S
Motor Vehicle Parts and Accessories Fitters	1,200	11%	No	NS
Manufacturers	1,100	56%	No	NS
Engineering Managers	900	161%	Yes	NS
Advertising and Marketing Professionals	900	-14%	Yes	NS
Advertising, Public Relations and Sales Managers	800	-32%	Yes	NS
Diesel Motor Mechanic	102	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

[81] Battery Stewardship Council, "$2.1b battery recycling sector critical to Australia's sovereign capability", 13 March 2025.

State of the Industry - Automotive Wholesale and Retail

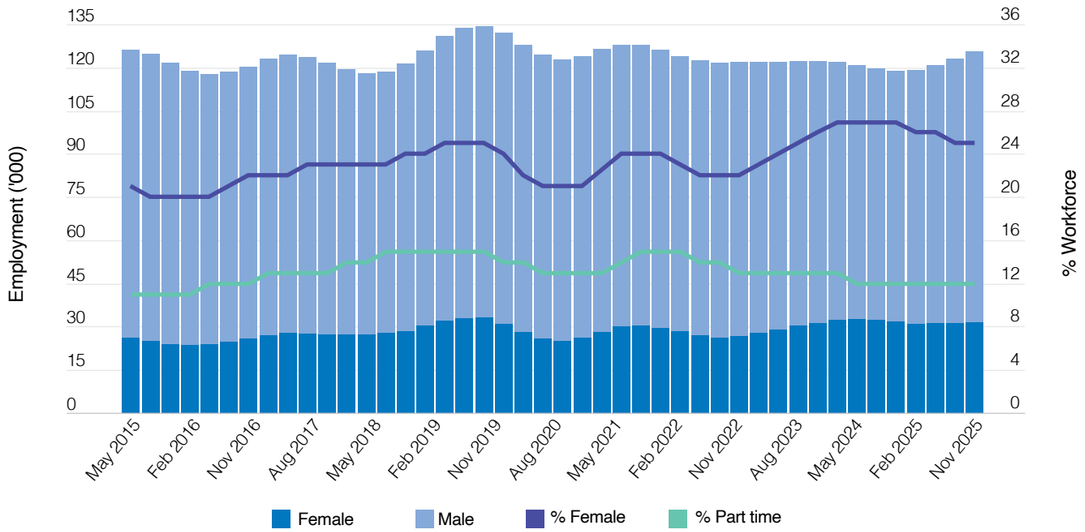
The Motor Vehicle and Motor Vehicle Parts Retailing and Wholesaling sector has seen improved female participation since 2022.

Female representation is at 25.1% in November 2025. Meanwhile, the proportion of part-time employees has declined over recent years to 11.7% (Figure A10). Motor Vehicle Dismantling and Used Parts Wholesaling has the most pronounced gender imbalance, with approximately 6.2 males for every one female.

Victoria has the most motor vehicle parts retailers in the country.

Melbourne's large vehicle base drives consistent demand in the state, while the state's location and logistics hubs enhance supply chain efficiency.[82] VIC also accounts for 27.8% of employment in the automotive retailing and wholesaling industry, and has the highest concentration of businesses, representing 30% of the total (Figure A11). Notably, QLD accounts for the majority of then enrolments (57%), compared with a share of the employment in the sector (27%).

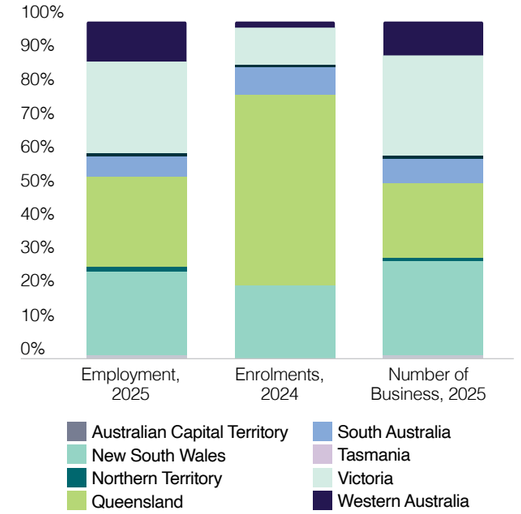
Figure A10: Automotive Wholesale and Retail employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

[82] IBISWorld, "Motor Vehicle Wholesaling in Australia", 2025.

Figure A11: Number of employments, delivery providers and businesses by state, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA; ABS, "Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

2 out of 11 key occupations in the automotive wholesaling and retailing industry are experiencing shortages in 2025.

Employment in Motor Vehicle and Motor Vehicle Parts Retailing and Wholesaling is dominated by Motor Vehicle and Vehicle Parts Salespersons (29,800), followed by Motor Mechanics (Automotive Technician) (14,200) and Retail Managers (10,200) (Table A5). The increasing electrification in the Automotive sector will see increased demand for electrical and digital skills, especially in the retail space and in customer facing roles to act both as a facilitator and educator.

Table A5: Key occupations, 2025

Occupations	Employed	10-yr vacancies change	Included in CSOL?	Shortage
Motor Vehicle and Vehicle Parts Salespersons	29,800	49%	No	NS
Motor Mechanics	14,200	108%	Yes	S
Retail Managers	10,200	19%	Yes	NS
Motor Vehicle Parts and Accessories Fitters	3,900	11%	No	NS
Sales Representatives	3,700	-13%	No	NS
Car Detailers	3,500	-6%	No	No data
Purchasing and Supply Logistics Clerks	3,200	47%	No	NS
Sales Assistants (General)	2,900	5%	No	No data
Delivery Drivers	2,900	96%	No	NS
Storepersons	2,700	50%	No	NS
Diesel Motor Mechanic	701	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

State of the Industry - Automotive Repair and Maintenance

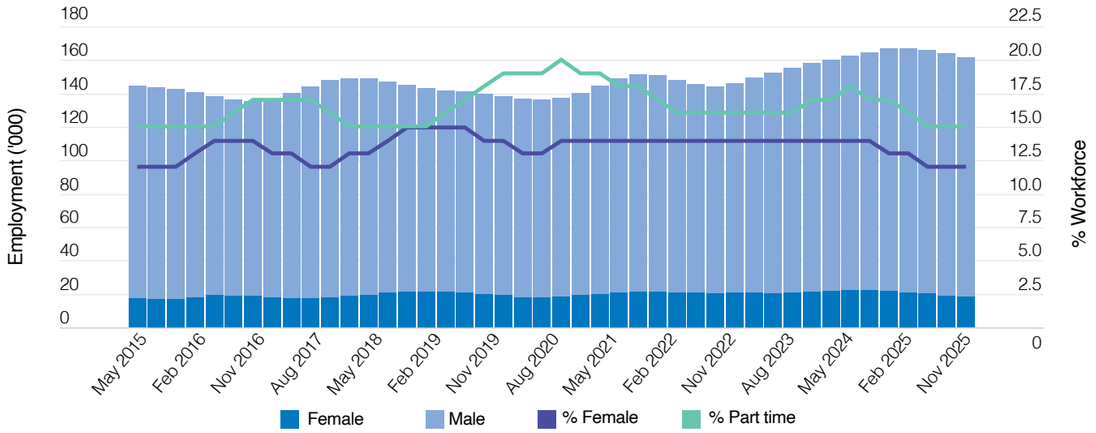
Employment in Automotive Repair and Maintenance increased in 2025.

The repair and maintenance industry employs 163,200 workers, with female participation stable at 11.6% (Figure A12). The proportion of part-time employees peaked at 19.6% in 2020, then declined from 18% in 2024 to 14.6% by November 2025.

New South Wales has the highest concentration of businesses.[83]

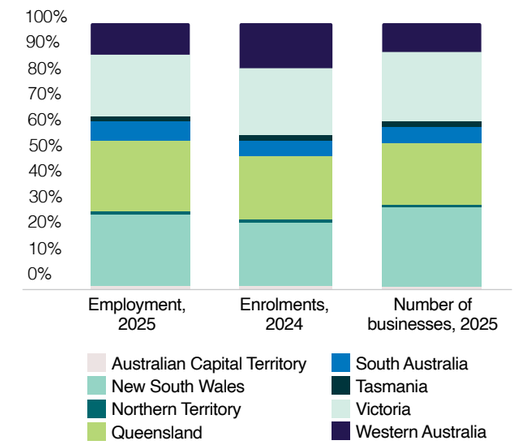
Across employment, enrolments, and the number of businesses, the distribution appears broadly consistent, with NSW, QLD, and VIC ranked as the top three states and territories in the sector. VIC accounts for the largest AUR repair and maintenance enrolments in 2024 (25.1%). Meanwhile, NSW has the highest concentration of businesses, representing 29.6% of the total with 27.0% of employment in Automotive Repair and Maintenance industry (Figure A13).

Figure A12: Automotive Repair and Maintenance employment, 2015–2025



Source: ABS, Labour Force, Australia, Detailed, November 2025; Trended by AUSMASA.

Figure A13: Number of employments, delivery providers and businesses by state, 2024–2025



Source: ABS, Labour Force, Australia, Detailed, 2025; Trended by AUSMASA; ABS, " Counts of Australian Businesses, including Entries and Exits, June 2021 to June 2025", December 2025; VOCSTATS, "Total VET students and courses 2015-2024", 2024.

The industry is a key enabler of road transport.

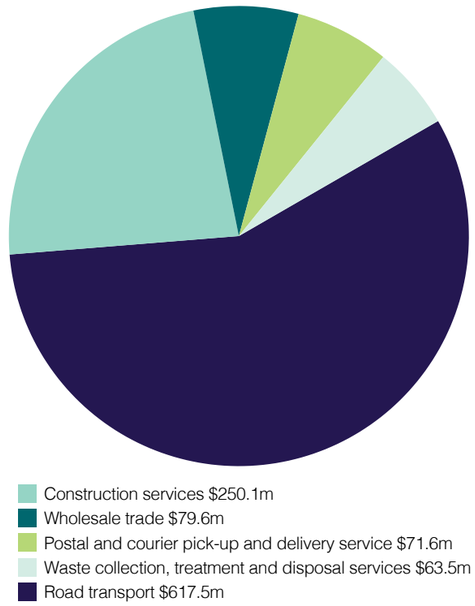
The sector contributes $617.5 m to the road transport sector reflecting the strong dependence of transport operators on repair and maintenance services. This is followed by construction services ($250.1 m), indicating significant use of these services for vehicle upkeep within the construction sector (Figure A14). The growing electrification in the industry has seen increased demand for electrical, digital, and diagnostic skills. However, there are skills bottlenecks, both due to a shortage of VET TAEs and the inaccessibility of OEM repair information for pathway providers.

[83] IBISWorld, "Motor Vehicle Engine and Parts Repair and Maintenance in Australia", 2025.

7 out of 11 key occupations in the Automotive Repair and Maintenance industry are experiencing shortages in 2025.

Employment in Automotive Repair and Maintenance is heavily concentrated in hands-on trade roles, led by Motor Mechanics (71,600), followed by Panelbeaters (11,600) and Car Detailers (7,700) (Table A6). The sector faces challenges in attracting, retaining, and recruiting skilled workers, often exacerbated by a lack of awareness of career pathways and visibility for younger generations. Conversations around licencing are also complicating the discussion, as it will create skills bottlenecks if not undertaken in tandem with evidence-led grandparenting of accreditation. Particularly acute for the regions where substitutability of skills in a workshop is higher than in a large dealer-linked repair facility, where OEM training is likely to be current and have dedicated streams, leading to a lower friction transition to a licensed system.

Figure A14: What does the sector support in 2023?



Source: ABS, "Australian National Accounts: Input-Output Tables, 2022-23", March 2025.

Table A6: Key occupations, 2025

Occupations	Employed	10-Yr vacancies change	Included in CSOL?	Shortage
Motor Mechanics	71,600	108%	Yes	S
Panelbeaters	11,600	33%	Yes	S
Car Detailers	7,700	-6%	No	No data
Motor Vehicle Parts and Accessories Fitters	7,400	11%	No	NS
Vehicle Painters	6,900	377%	Yes	S
Automotive Electricians	5,300	185%	Yes	S
Metal Fitters and Machinists	5,100	148%	Yes	S
Vehicle Body Builders and Trimmers	3,600	28%	Yes	S
General Clerks	3,000	30%	No	NS
Motor Vehicle and Vehicle Parts Salespersons	2,800	49%	No	NS
Diesel Motor Mechanic	2,028	No data	Yes	S

Source: ABS, Labour Force Estimate: Customised Report, 2026; JSA, "Occupation Shortage List", 2025; JSA, "Internet Vacancy Index (IVI)", February 2026; Department of Home Affairs, "The Core Skills Occupation List", 2024; Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage 2. Employment is calculated as the four-quarter average for 2025 across occupation unit groups within each sub-industry, rounded to the nearest 100. For Diesel Motor Mechanics, the 2021 census employment figure is used instead.

State of the Industry - Heavy Automotive

The industry is a key supporter of the transportation and Mining

Enrolment in heavy automotive training has increased over the years. Completions in AUR31220 Certificate III in Mobile Plant Technology have increased from 990 in 2020 to 2,342 in 2024.[84]

The heavy vehicle industry employs around 70,000 people involved in designing, manufacturing, and servicing roles.[85] The occupation with the highest employment among key occupations is earthmoving plant operator (11,000), followed by excavator operator (10,600) and diesel motor mechanic (7,400). Almost half of the key occupations for heavy automotive are currently experiencing workforce shortages (Table A7).

Table A7: Key occupations, 2021

Occupation	Employed	Shortage	In CSOL?
Earthmoving Plant Operators nfd	11,000	No data	No
Excavator Operator	10,600	S	No
Diesel Motor Mechanic	7,400	S	Yes
Mobile Plant Operators nfd	5,300	No data	No
Loader Operator	5,100	S	No
Earthmoving Plant Operator (General)	3,700	No data	No
Grader Operator	2,100	S	No
Bulldozer Operator	1,500	S	No
Mobile Plant Operators nec	1,400	NS	No
Road Roller Operator	600	S	No
Backhoe Operator	400	NS	No
Railway Track Plant Operator	400	S	No
Paving Plant Operator	300	NS	No
Other Mobile Plant Operators nfd	0	No data	No

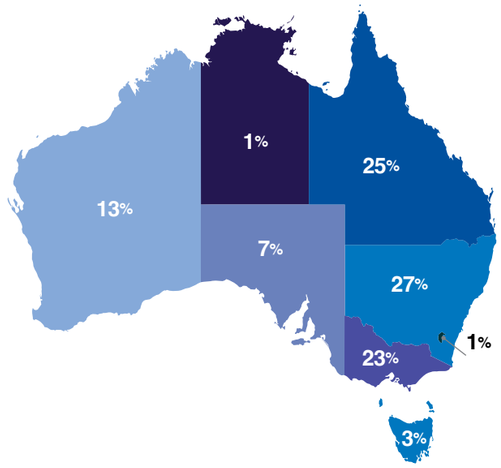
Source: ABS, 2021 Census Data, 2022; JSA, "Occupation Shortage List", 2025; Department of Home Affairs, "The Core Skills Occupation List", 2024. Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage. 2. The key occupations have been selected based on AUSMASA's remit. Since it is difficult to measure the heavy automotive workforce within ANZSIC classification, the occupation figures presented reflect the total number of workers in relevant occupations (ANZSCO 6-digit level) across all Australian industries.3. The employment figure is rounded to the nearest 10.

Employment is concentrated along the eastern coast

The state with the highest number of heavy automotive jobs in Australia is NSW (27.4%), followed by QLD (24.9%) and VIC (23.3%) (Figure A15). Mining machinery users (27%) represent the largest market for the Heavy Machinery Repair and Maintenance industry, relying on equipment such as excavators and loaders for extraction and material handling (Figure A16). The sector faces acute skills shortages, particularly in the TAE and diesel space. Standardised RPL can unlock some of these challenges, but there are other perception-based challenges around recruitment and attraction that will require coordinated action from various stakeholders. The sector also faces competition for skills from the Mining industry, which tend to have large workforce numbers dedicated to maintaining their heavy automotive fleets.

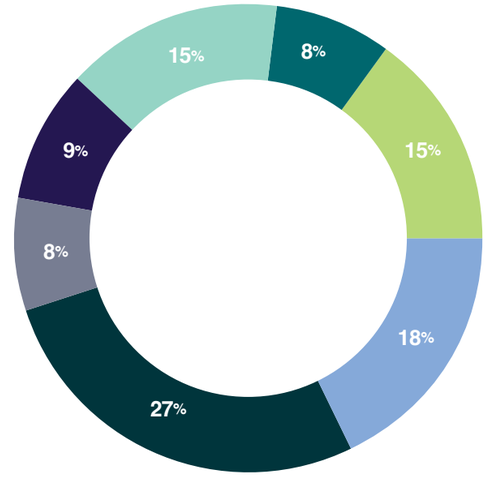
[84] AUSMASA, "VET Dashboard", 2025.
[85] HVIA, "Leading Australia's Heavy Vehicle Industry Since 1968", 2026.

Figure A15: Occupation by state, 2021



Source: ABS, 2021 Census Data, 2022; Note: The key occupations have been selected based on AUSMASA's remit.

Figure A16: Products & Services segments, 2025



Source: IBISWorld, "Heavy Machinery Repair and Maintenance in Australia", 2025.

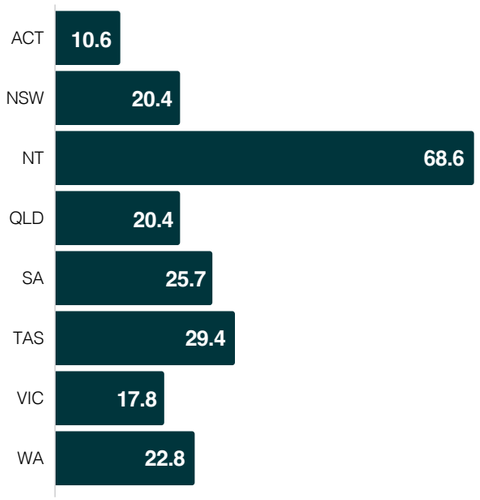
State of the Industry - Collision Repair

Enrolment in collision repair training programs has been increasing, which may help alleviate the supply shortage in the future.

Enrolments and completions in the collision repair Certificate III Automotive Body Repair Technology increased to 2,326 and 586, respectively, in 2024.[86] Most students who completed the Certificate in Body Repair Technology subsequently secured employment as vehicle body builders (51%).[87]

The collision-per-capita data highlights significant differences in road safety across Australian states and territories. The Northern Territory has the highest rate at 69 collisions per 10,000 people. The more populous states like Victoria (18) show comparatively lower rates (Figure A17). The number of fatal collisions has risen significantly over the past four years, increasing by 20% from 2020 to 2025.[88]

Figure A17: Road collision rate per capita by Australian state and territory as at June 2025

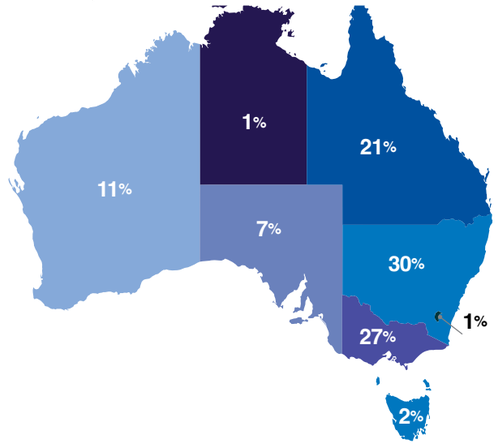


Source: Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts, "Fatalities 2026-01", 18 February 2026, ABS, "National, state and territory population June 2025", December 2025; Note: The collision rates shown are calculated per 10,000 residents to allow comparison between states and territories of different population sizes.

The industry faces critical skills shortages

Most body repair businesses are concentrated in NSW (29.9%), followed by VIC (27.4%) and (Queensland) QLD (21.2%) (Figure A18). In 2023, 67.8% of collision repair businesses were trying to recruit more staff. [89]Around 51% of technicians in collision repair are primarily sought for their expertise in panel repair and strip-and-fit (Figure A19), as these areas are in higher demand than other specialties.[90]

Figure A18: Motor Vehicle Body, Paint and Interior Repair business concentration, 2025



Source: IBISWorld, " Motor Vehicle Body, Paint and Interior Repair in Australia", 2025.

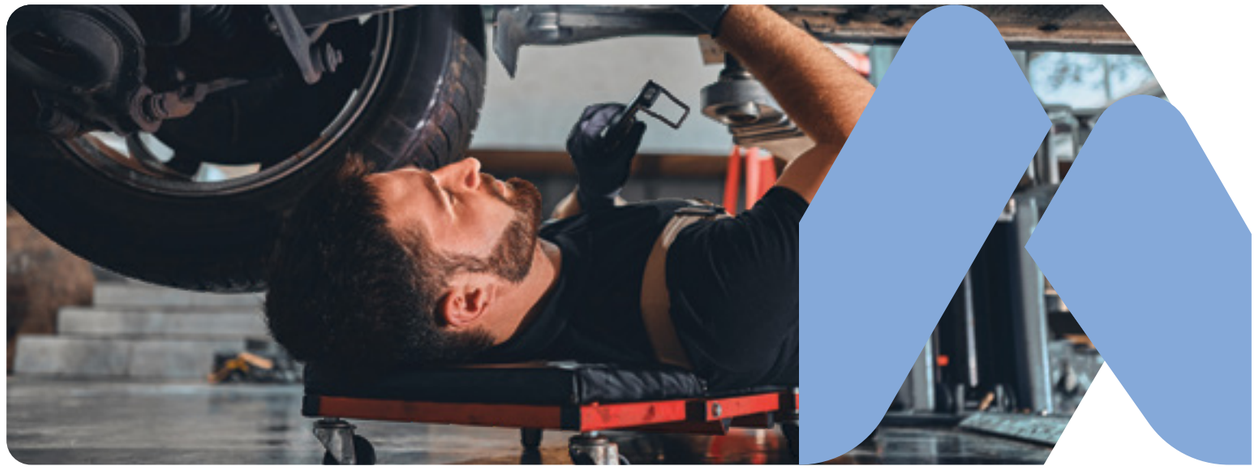
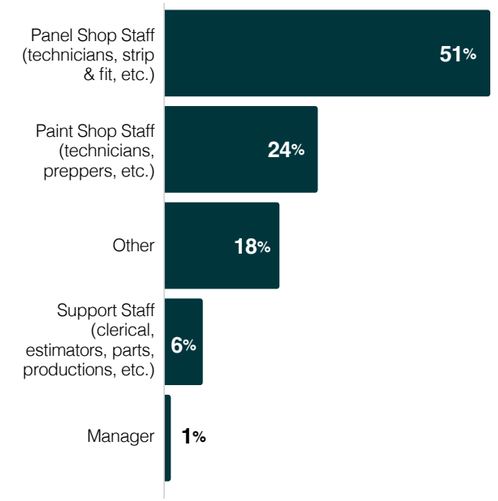


Figure A19: Staff category required in collision repair workshop, 2023



Source: Paint & Panel, "Collision Industry Census Results", 15 May 2023.

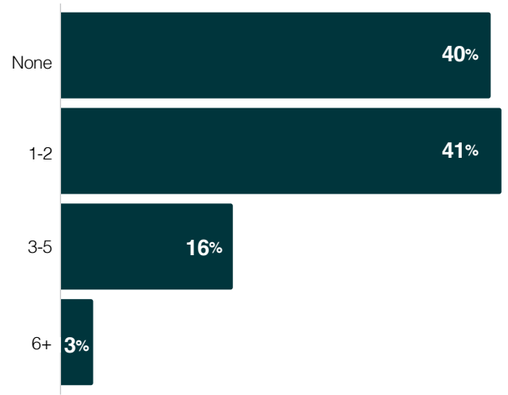
With critical shortages, skilled hours are of high value, and succession planning takes a back seat in these resource-tight environments

41% of collision repair businesses hire 1-2 apprentices, while 40% do not currently hire apprentices (Figure A20). Additionally, 49% of businesses plan to hire no more apprentices in the future. Apprenticeships offer valuable opportunities not just for the apprentice but also for the business's growth. While concerns about investing in training employees who may leave are common, the long-term consequences of failing to upskill staff should be considered. Employees who remain without ongoing development may lack the skills necessary to support business growth and efficiency.[91]

Low fill rates are driving higher lead times for post-collision repairs

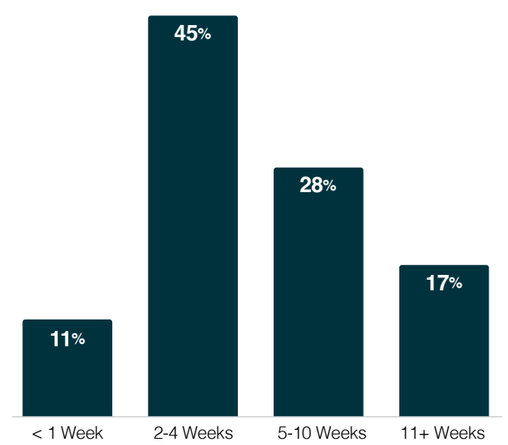
In the Automotive Repair and Maintenance sub-industry, the fill rate stands at 32%[92], significantly below the JSA shortage threshold of 67%[93]. Combined with 45% of collision repair workshop services experiencing lead times of 2-4 weeks, this indicates persistent supply shortages and operational delays (Figure A21).[94]

Figure A20: Number of apprentices employed in collision repair workshops, 2023



Source: Paint & Panel, "Collision Industry Census Results", 15 May 2023.

Figure A21: Lead time for repairs, 2023



Source: Paint & Panel, "Collision Industry Census Results", 15 May 2023.

[86] AUSMASA, "VET Dashboard", 2025.
[87] VOCSTATS, "Total VET students and courses 2015-2024", 2024.
[88] Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts, "Fatalities 2026-01", 2026.
[89] Paint & Panel, "Collision Industry Census Results", 2023.
[90] Paint & Panel, "Collision Industry Census Results", 2023.
[91] Paint & Panel, "Collision Industry Census Results", 2023.
[92] Deloitte, "MTAA member survey findings 2024", 2024.
[93] Jobs and Skills Australia, "2025 Occupational Shortage List Methodology", 2025
[94] Paint & Panel, "Collision Industry Census Results", 2023.

State of the Industry - Marine

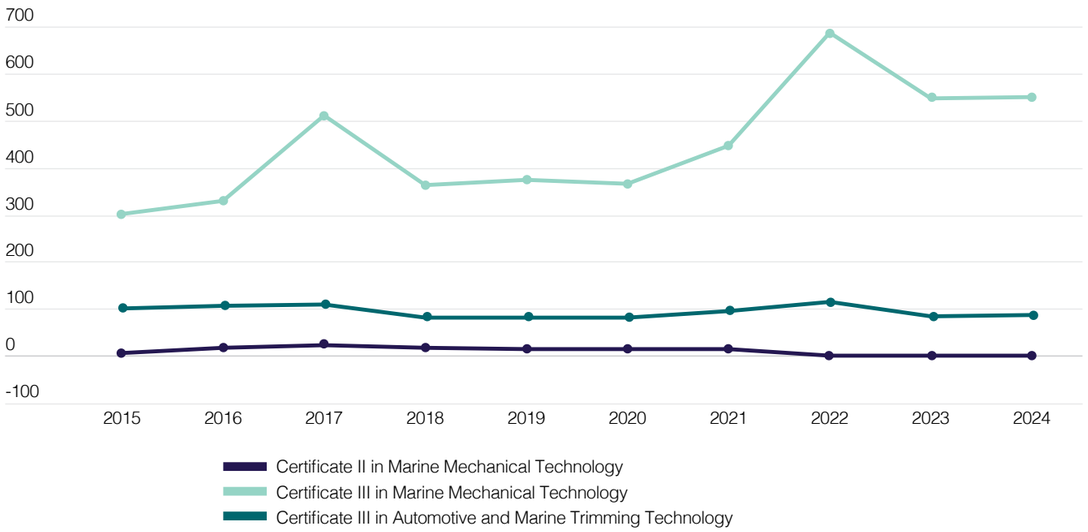
Critical roles are facing skills shortages in the Marine Automotive industry

27,500 people were directly employed by the industry in 2024.[95] Data on those employed in the industry can be difficult to classify under ANZSCO occupations, as boating supports a range of activities. Various occupations of interest to the Marine Automotive industry are in critical shortage (Table A8), mostly core technical and trade-aligned roles such as Marine mechanics and Technicians, Composite construction, Electrical Restricted and Trimmers.

Stable completions and enrolments in the Marine Automotive VET space

Although Certificate III in Marine Mechanical Technology has the highest enrolments, completions are greater for Certificate III in Automotive and Marine Trimming Technology. In 2024, Certificate III in Marine Mechanical Technology recorded 17 completions, whereas Certificate III in Automotive and Marine Trimming Technology recorded 110 completions, exceeding its enrolments for the year. This trend may indicate a potential misalignment between students' expectations and the content of the Marine Mechanical Technology program, or a lack of incentives to complete the course, contributing to lower completion rates than enrolments.

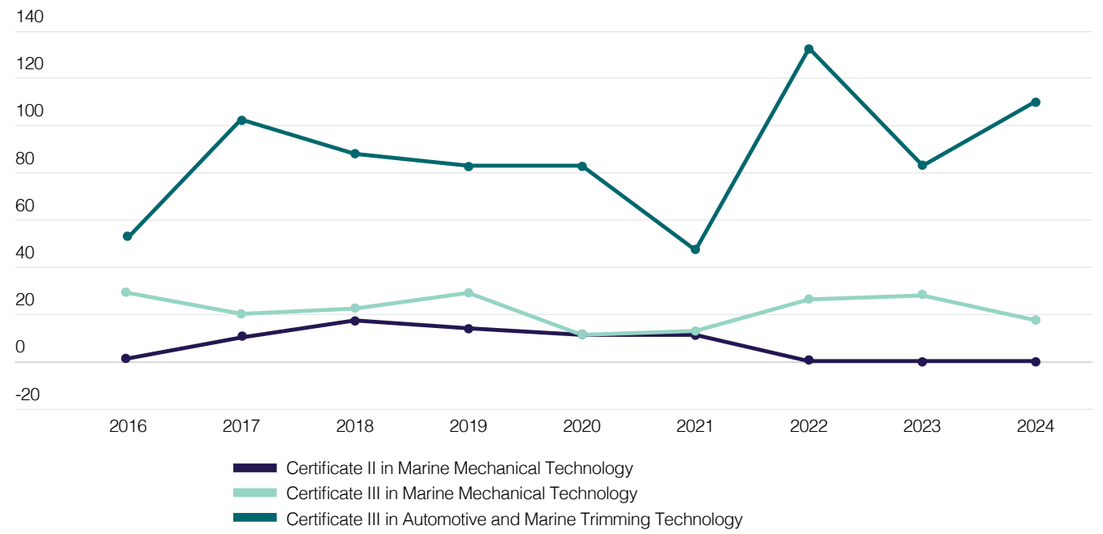
Figure A22: Marine AUR enrolments, 2016–2024



Source: VOCSTATS, "TVA program enrolments 2015-2024".
Note: Superseded and current qualifications added together

[95] Boating Industry Association, "Industry Data", 2024.

Figure A23: Marine AUR completions, 2016–2024



Source: VOCSTATS, TVA program completions 2015-2024.
Note: Superseded and current qualifications added together

All key roles for the Marine Automotive industry are in shortage

Industry anticipates systems integration and autonomous operations as future skills shortages. Furthermore, Boatbuilders and Shipwrights are included on the Australian Apprentice Priority List and the Core Skills Occupation List (CSOL) (Table A8), providing access to funding and incentive measures that support apprenticeship uptake and workforce development in response to identified skills shortages and limited female participation. However, given that the Marine Automotive industry intersects with other industries (marine, automotive, and fishing), identifying its exact size and changes due to various federal and state initiatives can be complicated.

The industry also faces challenges in recruiting, attracting, and retaining skilled workers, particularly younger cohorts.

Table A8: Key occupations, 2021

Occupation	Employed	Shortage	In CSOL?
Boat Builder and Repairer	2,600	S	Yes
Shipwright	800	S	Yes
Marine Surveyor	500	NS	No
Marine Transport Professionals nec	500	NS	No
Ship's Engineer	1,900	S	Yes
Vehicle Body Builder	3,900	S	Yes
Vehicle Trimmer	1,300	S	Yes
Motor Mechanic (General)	79,300	S	Yes

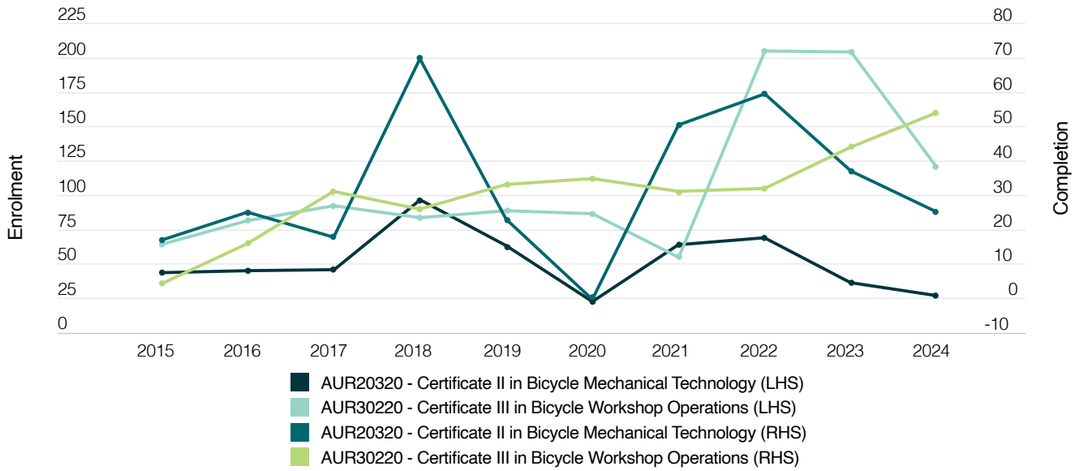
Source: ABS, 2021 Census Data, 2022; JSA, "Occupation Shortage List", 2025; Department of Home Affairs, "The Core Skills Occupation List", 2024. Note: 1. RS: Regional Shortage; S: Shortage; NS: Not in Shortage. 2. The key occupations have been selected based on AUSMASA's remit. Since it is difficult to measure the drilling workforce within ANZSIC classification, the occupation figures presented reflect the total number of workers in relevant occupations(ANZSCO 6-digit level) across all Australian industries. 3. The employment figure is rounded to the nearest 10.

State of the Industry - Bicycles

Declining enrolments in VET

Although enrolments in bicycle technician programs are declining (Figure A24), as many learners are opting for shorter, industry-specific courses like Cytech Technical courses[96], which offer practical skills and international recognition without the longer duration or higher cost of formal Australian Qualifications Framework (AQF) qualifications. While enrolments are declining, completions in AUR30220, Certificate III in Bicycle Workshop Operations, have increased to 54 in 2024 (Figure A24).

Figure A24: Enrolment and completion in bicycle technician training, 2015–2024



Source: VOCSTATS, "Total VET students and courses 2015-2024", 2024.

Victoria leads bicycle mechanic employment

Victoria has the highest share of bicycle mechanics (28.4%), followed by New South Wales and Queensland (25.8%) and 20.6%). This distribution aligns with Australia's most populous states, where higher bicycle use is likely to drive greater demand for bicycle mechanics (Figure A25).

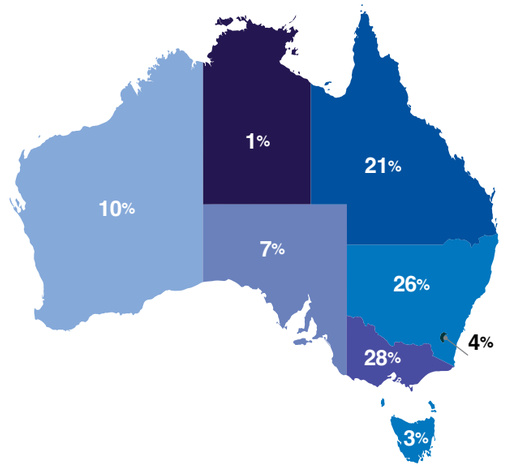
Most bicycle businesses operate in NSW (30.2%), followed by VIC (26.0%) and QLD (22.1%) (Figure A26). However, VIC and ACT record the highest per capita spending, supported by urban environments and large student and young professional populations, where cycling is widely integrated into daily life.[97] Bicycles account for 0.7% of all trips in Australia, surpassing the share of motorcycle (0.4%) and tram travel (0.3%).[98]

The cycling ecosystem generates $18.6 billion in economic and social benefits

In 2022, the Australian cycling economy generated an estimated $18.6bn in economic and social benefits, supporting 60,671 direct and indirect jobs nationally. This included $16.9bn in total economic contribution from cycling and $954m in avoided healthcare costs and social benefits. Additionally, cycling helped avoid 514,096 tonnes of carbon dioxide equivalent (tCO2-e) and 2.2 m kg of air pollutants (Table A9).[99]

96 Cytech, "The Bicycle Academy, Australia", 2026.
97 IBISWorld, "Bicycle Retailing and Repair in Australia", 2025.
98 ABS, "Australia's journey to work, 2021", 2022.
99 We Ride Australia, "The Australian Cycling and E-Scooter Economy in 2022", 2023.

Figure A25: Bicycle mechanic by state, 2021

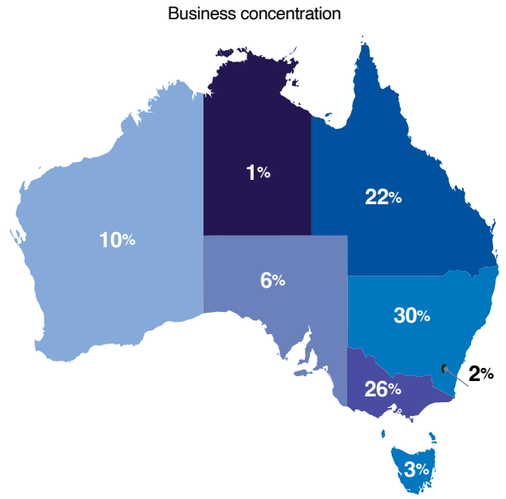


Source: ABS, 2021 Census Data, 2022.

With the growth of E-bikes, some in the industry have expressed increasing concerns about meeting safety standards

The Australian bicycle industry has highlighted concerns about the growing number of e-bikes on the market that may not meet consistent safety standards. Variations in regulations since 2021 have led to overpowered machines, battery fire hazards and legal confusion. Bicycling organisations have called for stricter import and safety standards (such as EN 15194) and updated national definitions and regulations to ensure e-bikes sold and used are safe and fit for purpose.[100]

Figure A26: Bicycle business concentration, 2025



Source: IBISWorld, "Bicycle Retailing and Repair in Australia", 2025.

Table A9: Estimated benefits on cycling and e-scooters, 2022

Estimated benefits	Value (2022)
Economic Benefits from Direct Expenditure	
Total Economic Contribution of Cycling (Direct & Indirect Output)	**$16.9 bn**
• Direct Output (Cycling)	$6.7 bn
• Indirect Output (Cycling)	$10.2 bn
• Direct Employment (Cycling)	32,634
• Indirect Employment (Cycling)	25,638
Total Economic Contribution of E-scooters (Direct & Indirect Output)	**$728 m**
• Direct Output (E-scooters)	$295 m
• Indirect Output (E-scooters)	$433 m
• Direct Employment (E-scooters)	1,304
• Indirect Employment (E-scooters)	1,095
Health and Social Benefits of Cycling	
Avoided Net Financial Costs to Australia's Healthcare System	$313.3 m
Productivity Benefits	$540.4 m
Value of Life Years Gained	$100.7 m
Total Economic, Social and Health Benefits	**$18.6 bn**
Total Jobs (FTE)	**60,671**
Additional Environmental Benefits of Cycling	
GHG Emissions Avoided	514,096 tCO2-e
Air Pollutants Avoided	2.2 m kg

Source: We Ride Australia, "The Australian Cycling and E-Scooter Economy in 2022", 10 November 2023.

100 We Ride Australia, "60 Minutes report 'Riding for a Fall", 2025.

The way forward

This section highlights opportunities for stakeholders to advance outcomes for the industries in our remit. These are based on opportunities identified through our research. These opportunities are not owned by any single organisation; they require coordinated action across industry, education, and government. We welcome opportunities to collaborate and coordinate. This is only a sample; our whole library is available through our research publications.

Mining	Priority Type		
Industry	**Core**	**Emerging**	**Risk-associated**
Community engagement and responsible transitions:			
Embed social licence considerations into business decisions, particularly around worker displacement during technological transition.	✓	✓	✓
Collaborate with communities, employees, and governments for region-specific planning for mine closure and critical minerals transitions.	✓	✓	✓
Participate in workforce transition programs, supporting employees through regional and economic transitions, especially post-mine closure.	✓		✓
Workforce development and career pathways:			
Provide mentoring, succession planning, formal recognition of skills, and improved visibility of career pathways to support future workforce development.	✓		
Implement phased technology rollouts to manage training demands and safety risks.			✓
Promote lifelong learning, including modular pathways, to support continuous upskilling across the mining lifecycle.	✓		
Government			
Innovation:			
Incentivise R&D in electrification, automation, and AI, and support regional training expansion and Net Zero priorities.		✓	
Expand VET–Higher Education collaboration to build pathways into data analytics, mechatronics, and AI systems.		✓	
Policy and funding for inclusive transitions:			
Align policies to enable career transitions across sub-industries within mining, such as the Coal-to-Critical Minerals workforce transitions, including transferable skills and accredited pathway reforms.	✓		✓
Provide industry-aligned funding and support for higher education to improve the diversity of the workforce and support for at-risk cohorts.	✓		
Research Priorities			
Workforce Transitions:			
Conduct stakeholder engagement to better understand mine closures, rehabilitation processes, coordination requirements, and local community needs.		✓	
Strengthen research–industry–university links to support knowledge transfer and keep academic capability aligned with industry demand.	✓		
Future workforce demands:			
Map workforce demand, transferable skills, and emerging skill needs across the minerals sector and mine life stages.	✓		
Undertake training product gap analyses to determine whether the VET system and national curriculum are aligned with emerging and future workforce needs, especially in rehabilitation and new technology environments.		✓	
Analyse factors influencing mining engineer attraction and retention, including student and educator experience.	✓	✓	
People, skills & partnerships			
Workforce diversity and flexibility:			
Increase participation of women and First Nations peoples to reduce vulnerability to skills shortages.	✓		✓
Build a more flexible, diverse workforce by encouraging pathways to promote modular learning, and employment-based learning for specialists like geologists, mining engineers, metallurgists, etc.	✓		
Improve attraction, recruitment, and retention of mining engineers through research into lived experiences and workforce perceptions.		✓	
Upskilling for emerging technologies:			
Support upskilling in new and emerging technologies, including electrification, automation, VR/AR tools, and AI-enabled training.		✓	

Automotive	Priority Type		
Industry	**Core**	**Emerging**	**Risk-associated**
Electric Transition:			
Partner with RTOs, OEMs, or independent providers to improve consistency and quality of training delivery, especially for EVs		✓	
Assess long-term reliability and safety of BEVs in mining environments, including shocks, vibrations, and extreme temperatures.		✓	✓
Develop methods to support the efficient and safe recycling/repurposing of end-of-life batteries from mining BEVs.		✓	✓
Workforce Strategy:			
Strengthen supervision and mentoring to improve early-stage apprentice retention; invest in mentoring programs to build a positive work culture.	✓		
Build a diverse workforce, increasing participation from women, First Nations people, young people, and other underrepresented groups.	✓		
Consider pathways to enable capacity building for existing workforce.	✓		
Government			
RPL modernisation and consistency:			
Create a national standard for recognised prior learning (RPL) to improve clarity and consistency.	✓		
Encourage AI-supported, low-resource RPL processes.	✓		
Align incentives through policy:			
Engage stakeholders on the need for restricted electrical licences for automotive and mobile plant technicians.		✓	✓
Review and update the Priority List and Apprenticeship Incentive System to improve fairness and effectiveness for both apprentices and employers.	✓	✓	
Reassess existing support payment structures to improve equity between junior and adult apprentices.	✓	✓	
Support training delivery:			
Address training and business barriers for small, medium, and remote employers.	✓		
Support regional training delivery to enhance accessibility.	✓		
Research Priorities			
Electrification and Safety Skills:			
Investigate skills requirements for high-voltage isolation, hydrogen safety, and battery systems across vehicles and mobile machinery.		✓	✓
Explore training tools that improve understanding of BEV hazards, battery risks, and fire safety.	✓		✓
Analyse alignment between AUR and UEE qualifications, particularly relating to electrification and pathways for isolation/depowering skills.			✓

Career Pathways:			
Conduct research to map career pathways within and beyond the automotive sector to better understand workforce supply and demand pressures.	✓		
Map the evolution of automotive trades, identifying convergence of roles and emerging job functions.		✓	
Map EV technician pathways across AQF and accredited/non-accredited training.		✓	
Investigate early education pathways supporting structured automotive career awareness.	✓		
Investigate opportunities to scale mid-career apprenticeships, including entry and pay structures.	✓		
Understand regional supply/demand dynamics to strengthen workforce readiness.	✓		
Training Modernisation:			
Conduct training product gap analyses to determine whether current qualifications are outdated.	✓		✓
Assess emerging technologies such as 3D printing, AI, and composites for integration into training programs.		✓	
Evaluate training package structures and the delivery of missing units, especially for smaller RTOs.	✓	✓	
Workforce Structure, Supply & Demographics:			
Examine VET trainer shortages, particularly those with EV expertise.	✓		
Study workforce demographics, including ageing and regional retention challenges.	✓		
Conduct research to evaluate succession planning effectiveness in the automotive workforce.	✓	✓	
Pathways			
Workforce inclusion:			
Promote lifelong learning aligned with future skills needs, including digital and Information and Communication Technology (ICT) capabilities for EVs and ADAS-related software.	✓		
Training-industry alignment:			
Align upskilling pathways to new technologies through modular and flexible learning options.	✓	✓	
Develop flexible, stackable training including modular pathways and AI-supported recognition pathways.		✓	

Data methodology

Explanatory notes to workforce demographic and occupational insights

AUSMASA's workforce analysis is based on the 2 key government classification systems: ANZSIC and ANZSCO.

- ANZSIC (Australian and New Zealand Standard Industrial Classification) classifies businesses into industry sectors based on their primary activities.
- ANZSCO (Australian and New Zealand Standard Classification of Occupations) categories all occupations and jobs using the skill-based classification.[101]

Trending methodology for employment data

The total workforce numbers are calculated by aggregating the workforce numbers of ANZSIC 3-digit groups from the Australian Bureau Statistics' (ABS) quarterly Labour Force Survey (LFS). The workforce numbers have been seasonally adjusted using the 13-term Henderson filter moving averages.

Defining the State of Industry

Sub-industries within the State of Industry section are classified using ANZSIC and, ANZSCO. In cases where these frameworks do not fully capture the characteristics of specific industries, additional economic activity indicators are applied to ensure appropriate classification.

The table below outlines the scope and definitions of each industry included in the analysis.

State of Industry sub-section	Scope
Mining	ANZSIC - Main Division B Mining
Coal Mining	ANZSIC – Subdivision 06 Coal Mining
Oil and Gas Extraction	ANZSIC – Subdivision 07 Oil and Gas Extraction
Metal Ore Mining	ANZSIC – Subdivision 08 Metal Ore Mining
Quarrying	ANZSIC – Subdivision 09 Non-Metallic Mineral Mining and Quarrying
Exploration and Other Mining Support Services	ANZSIC – Subdivision 10 Exploration and Other Mining Support Services
Drilling	There is no dedicated ANZSIC classification for the drilling sector. Employment estimates therefore draw on relevant occupations (712211 Drillers, 821912 Drillers Assistants, and Drillers, Miners, and Shot Firers not further defined under ANZSCO), as well as support workers associated with active rigs.[102]
METS	There is no dedicated ANZSIC classification for the METS sector. Our approach to defining the METS sector uses ABS Input–Output (IO) tables to track sub-industry inputs and outputs, identifying industries associated with METS. Employment is estimated by applying relevant proportions (e.g. 95% for Exploration and Mining Support Services in FY23) to workforce data in each IO category. As individuals may work across multiple industries, these figures represent an upper bound of the workforce, reflecting roles rather than distinct workers. ABS data are available for FY13 and FY19 to FY23. FY13 is used as a baseline to assess long-term and recent trends. FTE roles are calculated as full-time plus 50% of part-time roles, with trends largely driven by full-time employment.
Automotive	ANZSIC Subdivision 35, 39, Group 231, and 941
Automotive Manufacturing	ANZSIC – Group 231 Motor Vehicle and Motor Vehicle Part Manufacturing
Automotive Wholesale and Retail	ANZSIC – Subdivision 35 Motor Vehicle and Motor Vehicle Parts Wholesaling, 39 Motor Vehicle and Motor Vehicle Parts Retailing
Automotive Repair and Maintenance	ANZSIC – Group 941 Automotive Repair and Maintenance
Heavy Automotive	There is no dedicated ANZSIC classification for the Heavy Automotive sector. Instead, it spans relevant occupations across manufacturing, repair and maintenance, and transport. Employment figures presented in this section are based on the HVIA's estimates.[103]
Collision Repair	There is no dedicated ANZSIC classification for the Collision Repair sec-tor. Employment numbers are based on Australasian Paint & Panel's estimates. The collision rates shown are calculated per 10,000 residents to allow comparison between states and territories of different population sizes.
Marine	There is no dedicated ANZSIC classification for the Marine sector. Em-ployment estimates of the key occupations Boat Builder and Repairer (399111), Shipwright (399112), Marine Surveyors (231215), Marine Transport Professionals (231299), Ship's Engineer (231212), Vehicle Body Builder (324211), Vehicle Trimmer (324212), Motor Mechanic (General) (321211) are based on ABS Census 2021 data. As the Marine Automotive industry intersects with other industries, including marine, automotive, and fishing sectors, we are unable to identify the exact employment numbers within the Marine Automotive industry. Our remit is limited to the Automotive aspects of the industry.
Bicycles	There is no dedicated ANZSIC classification for the Bicycles sector. Employment numbers are based on the ABS Census 2021 figure for Bicycle Mechanics.

101 We will work with ABS to transition our occupation classification references to OSCA as OSCA becomes more widely adopted and integrated to other ABS products. Please find more information on OSCA as it relates to AUSMASA here: OSCA Update | Mining and Automotive Skills Alliance (https://ausmasa.org.au/news-and-events/osca-update/)

102 ADIA, "Economic Impact of Drilling in Australia", 2025.

103 HVIA, "Industry At A Glance", 2026.

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